ORDER NO. VRD-8005-393

Service Manual

Video Cassette Recorder

Panasonic VHS

NV-7000-E -B

Vol. 1

Summary Operating Instructions

SPECIFICATIONS

Power Source: NV-7000-E, -B, 110, 120, 220, 240V AC 50/60Hz

Power Consumption: Approx. 52 watts

Television System: CCIR: 625 lines, 50 fields
PAL colour signal

Video Recording System: 2 rotary heads, helical scanning system
Luminance: FM azimuth recording
Colour signal: converted subcarrier phase shift recording

Audio Track: 1 track

Tape Format: Tape width 12.7mm high density tape

Tape Speed: 23.39mm/s

Record/Playback Time: 180 min. with NV-E180

FF/REW Time: Less than 4.5 min. with NV-E180

Heads: Video: 2 rotary heads
Audio/Control: 1 stationary head
Erase: 1 full track erase

Input Level: Video: VIDEO IN connector (BNC)
1.0Vp-p, 75Ω unbalanced
Audio: MIC IN jack
−70dB, 600Ω unbalanced
LINE IN jack
−20dB, 100kΩ unbalanced

Output Level: Video: VIDEO OUT connector (BNC)
1.0Vp-p, 75Ω unbalanced
Audio: LINE OUT jack
−6dB, 600Ω unbalanced
RF Modulated: UHF channel 36 (±4)
75Ω unbalanced

Weight: 12.7kg

Dimensions: 480(W)×136(H)×356(D)mm

Accessories Supplied:
- 1 pc. Video cassette tape, NV-E120
- 1 pc. DIN-DIN coaxial cable, VJA0130
- 1 pc. Dust cover, VFB0008
- 1 pc. Remote control unit, VSQ0117, Approx. 5m

Optional Accessories:
- Video cassette tape:
  - NV-E180 Approx. 258m, 180 min.
  - NV-E120 Approx. 174m, 120 min.
  - NV-E60 Approx. 88m, 60 min.
- Video camera, WV-3300E
- Wireless remote controller, NV-A700
- Microphone

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

INTRODUCTION

This service manual contains technical information which will allows service technicians to understand and service the Panasonic PAL VHS Video Tape Recorder Model NV-7000-E/-B.
The NV-7000-E/-B has many special features as shown below.
These features in addition to the basic PAL VHS Format make the unit an ideal one for your culture and entertainment.

FEATURES

1. Colour or black & white recording and playback of ½″ VHS cassettes. Compatible with all other VHS systems.
2. Three hour recording and playback on a single NV-E180 VHS cassette tape.
3. 14-day/8-programme timer with 1-hour battery back-up system (with built-in rechargeable batteries).
4. High speed search function with picture (cue & review operation at 9 times normal speed).
5. Feather touch non-locking pushbuttons for full operation. Use of microprocessor allows changing modes without pushing the STOP button.
6. Audio dubbing.
7. 12-mode remote control capability (record, play, fast forward, rewind, stop, pause/still, still advance, half speed, double speed, cue, review, TV channel selection.)
8. Dolby* Noise Reduction System significantly reduces tape hiss, increases the dynamic range of the audio signal and improves S/N ratio to 50 dB.
9. Built-in 12-channel electronic tuner.
10. Auto Rewind automatically rewinds the tape when it reaches the end during recording or playback; Counter Memory automatically rewinds the tape to the 4-digit tape counter "0000" position for subsequent playback.
11. Damped cassette tape ejection.
12. Simple editing function eliminates annoying picture noise between shots.
13. High horizontal resolution: more than 300 lines black & white, more than 240 lines colour.
14. Dropout/noise compensator.
15. Crystal oriented HPF™ video heads offer high performance and durability due to hard, uniformly distributed ferrite particles.
16. New reduced-size, lightweight annealed aluminum die-cast chassis for strength and stability.
17. Quartz-locked direct drive video head cylinder (DDC) provides greater stability and less jitter than belt-driven systems.
18. Direct drive capstan servo system drives tape to maintain correct speed and to help ensure a consistent video signal.
19. All four motors run on DC current to keep their speed independent of the power line frequency. Unit can be used with either 50 or 60 Hz.
20. PAUSE/STILL mode for temporary stops during recording and playback. STILL frame can be obtained during playback, and the PAUSE/STILL mode shuts off automatically after five minutes to protect video heads and tape.
21. Automatic still frame compensation (ASC) circuitry for a clean still picture with a minimum of video noise.
22. Still advance button works from STILL mode. Advances the tape one frame at a time in the STILL mode (only with Remote Controller).
23. Double speed and half speed playback (only with Remote Controller).
24. Built-in RF converter for playback onto conventional TV receiver.
25. Built-in RF booster amp for improved TV reception in fringe areas.
26. Automatic gain control (AGC) for video and audio.
27. Automatic TV/VTR selection of either VTR RF output or external TV antenna signal for TV receiver monitoring.
28. Camera remote control jack.
29. Tracking control.
30. Built-in RF test signal generator for tuning TV receiver to the RF converter channel.
31. Input (tuner/camera) selector.
32. Wireless remote control connector is provided for optional infrared wireless remote controller.
33. Moisture sensor shuts machine off automatically when operating conditions are too damp.
34. Compact size and sophisticated design.

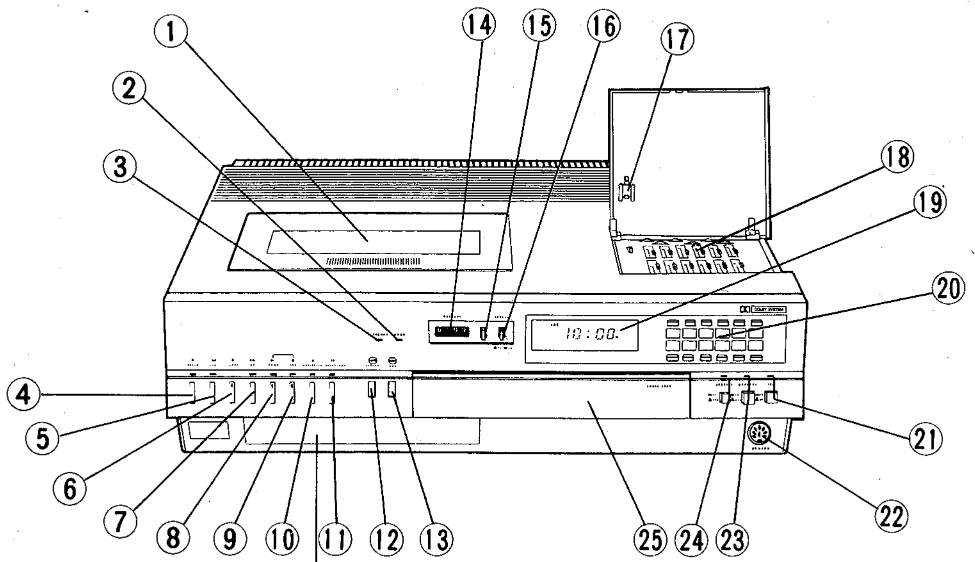
*Dolby and the Double-D are registered trademarks of Dolby Laboratories.

CONTENTS

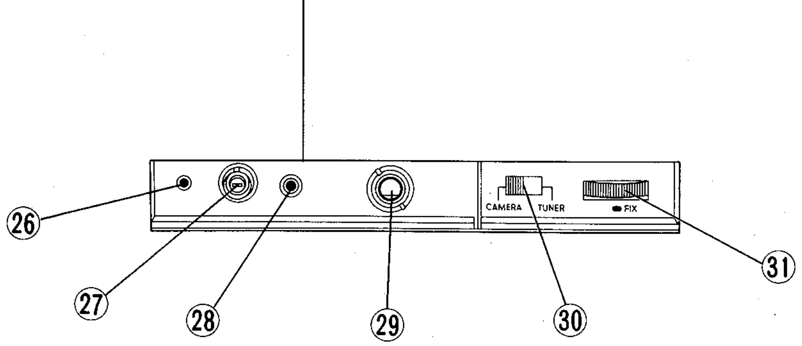
SPECIFICATIONS .... **Cover**
MAJOR OPERATING COMPONENTS **1-1**
OPERATING COMPONENTS AND THEIR FUNCTIONS **1-1**
ANTENNA CONNECTION **1-2**
USING THE REMOTE CONTROL UNIT **1-2**
USING THE NV-7000 WITH AN OPTIONAL VIDEO CAMERA **1-2**
AUDIO DUBBING **1-3**

MAJOR OPERATING

TOP and FRONT



(Behind the Front Cover; slide lid to the right for access)



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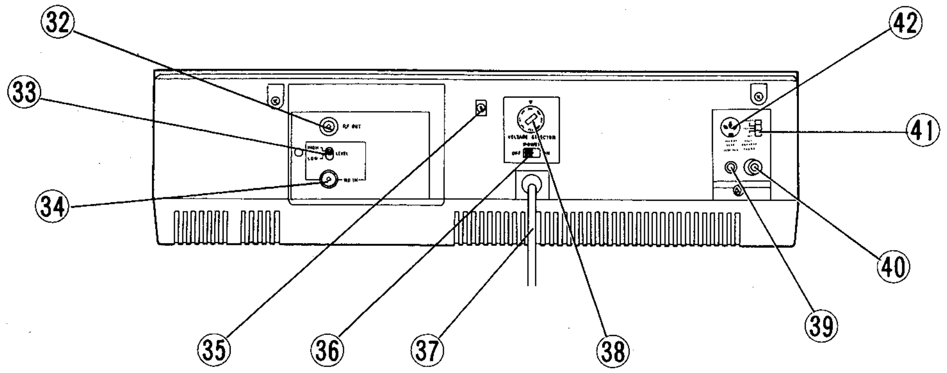

OPERATING COMPONENTS AND THEIR FUNCTIONS

TOP and FRONT

① **Cassette Holder**
For insertion of the video cassette.

② **Moisture Lamp** [MOIST]
This lamp illuminates if condensation (moisture) is present inside the recorder.

③ **Camera Input Indication Lamp** [CAMERA]
Illuminates when the Input Signal Selector ㉚, behind the front cover, is set to the "CAMERA" position.

④ **Eject Button** [EJECT]
When pushed, the lamp illuminates and the Cassette Holder rises for insertion or removal of a video cassette.

⑤ **Rewind Button** [REW]
When pushed, the lamp illuminates and the tape is rewound.

⑥ **Stop Button** [STOP]
When pushed, the tape stops moving.

⑦ **Fast Forward Button** [FF]
When pushed, the lamp illuminates and the tape is moved quickly in the forward direction.

⑧ **Play Button** [PLAY]
When pushed, the lamp illuminates and the recorded tape is played back.

⑨ **Record Button** [REC]
When pushed together with the Play Button ⑧, both lamps illuminate and the recording starts.

⑩ **Audio Dubbing Button** [AUDIO DUB]
When this button is pushed together with the Play Button ⑧, both lamps illuminate and an audio track can be added ("dubbed") onto the tape.

⑪ **Pause Button** [PAUSE/STILL]
When this button is pressed during playback, the lamp illuminates, and the tape movement temporarily stops. A still image will appear on the TV screen. When the button is pressed once again, the Pause Lamp will go off, and tape movement will begin again. When this button is pressed during recording, the lamp illuminates, and the tape will temporarily stop after moving back slightly. When the button is pressed once again, the lamp will go off, tape movement will begin again, and, after a moment, the recording will begin again. The recording before the pause and after the pause will thus be very cleanly joined.

⑫ **Review Button** [REVIEW]
When this button is pressed during playback, the video image will playback in reverse. The review playback will continue as long as the button is depressed.

⑬ **Cue Button** [CUE]
When this button is pressed during playback, the video image will playback at fast-forward speed. Cueing will continue as long as the button is depressed.

⑭ **Tape Counter** [COUNTER]
This is a digital counter which gives a reference as to how far the tape has moved.

⑮ **Tape Counter Reset Button**
Press this button to reset the Tape Counter ⑭ to "0000".

⑯ **Memory Switch** [MEMORY]
When this switch is turned on, the tape will automatically stop rewinding just past the point where the Tape Counter ⑭ was previously set to "0000".
*The tape will not stop at this point during review playback.

⑰ **Automatic-Fine-Control Switch** [AFC]
This is the selector for automatic fine tuning. It should normally be left in the "ON" position.

⑱ **Tuning Control Compartment**
Open the cover of this compartment, and use the tuning controls to adjust to the local transmitting channels.

⑲ **Digital Timer**
This indicates the present time, and the starting and stopping time for recording.

⑳ **Channel Selector Buttons/Indicator Lamps**
When the button for the desired channel is pressed, the programme being broadcast will be shown on the television screen.

㉑ **VTR Switch/Indicator Lamp** [VTR]
When this switch is on, power is supplied to the unit. This lamp and the left end of the upper row of Channel Indicator Lamps ⑳ will then illuminate.
(The Digital Timer ⑲ will indicate regardless of the position of this switch.)

㉒ **Remote Control Terminal** [REMOTE]
The following operations can be performed from a distance when the included remote control unit is connected. During recording, the tape can be temporarily stopped (pause). During playback, the control can be used for cueing or reviewing. (The cord for the remote control unit is approximately 5 meters long.)

㉓ **Timer Rec Switch/Indicator Lamp** [TIMER]
When this switch is turned on, the lamp will illuminate, and recording will automatically begin and end at the preset times.

㉔ **Dolby Noise-Reduction Switch** [DOLBY NR]
When set to the "IN" position during recording and playback, the audio noise-reduction circuitry will function, giving recording and playback sound with less noise.
For playback of a tape recorded without using the Dolby system, set this switch to the "OUT" position.

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㉕ **Timer Compartment Cover**
Open this cover and set the timer to the present time and to the desired times for automatic recording.

(Behind the Front Cover.)

㉖ **Camera Remote Control Jack [CAMERA REMOTE]**
This jack is used when a remote-control cable of the video camera is connected.

㉗ **Video Input Connector [VIDEO IN]**
For connection of a video camera or other video input signal to be recorded.

㉘ **Audio Input Jack [AUDIO IN]**
This connector accepts the audio signal from the optional video camera to enable the recorder to record the audio portion.

㉙ **Microphone Input Jack [MIC]**
This is for the connection of a microphone to record sound onto the tape.

㉚ **Input Signal Selector [INPUT SELECT]**
This switch is used to select between 2 incoming signals from which recordings can be made.

1) In the "TUNER" position, the signal from the built-in tuner will be recorded.
2) In the "CAMERA" position, the signal which is connected to the Video Input Connector ㉗ and Audio Input Jack ㉘ on the front panel will be recorded.

㉛ **Tracking Control [TRACKING]**
Use this control if belt-shaped "noise" appears in the playback image. It should normally be left in the centre position "FIX".

REAR

㉜ **RF Output Connector [RF OUT]**
This connects to the antenna terminal (COAXIAL type) of a conventional TV receiver. The cable supplied as a standard accessory is used for the connection between the recorder and the TV set.

㉝ **RF Signal Level Switch [LEVEL]**
This switch is for use to attenuate the reception of the VHF and/or UHF antenna signals.

㉞ **RF Input Connector [RF IN]**
This is where the external antenna is connected to the recorder. The connector is a "COAXIAL" type.

㉟ **RF Converter Channel Selector**
Select a channel which is unused for broadcasting in your locality.

㊱ **Power Off/On Switch [POWER]**
Switching on applies power to the recorder. To switch off the recorder completely, set the Power Off/On Switch to the "OFF" position.

㊲ **AC Power Cord**

㊳ **Voltage Selector [VOLTAGE SELECT]**
Be sure to select the local voltage by turning the selector to view the voltage indication in the small window.
Voltage indication: NV-7000-E, -B
110, 120, 220, 240 V AC

Note:
The Power Off/On Switch ㊱ must always be in "OFF" position and the power cord disconnected from mains prior to starting any voltage setting.

㊴ **Audio Output Jack [AUDIO OUT]**
The audio signal from either the recording source, or the playback audio is present at this connector.

㊵ **Video Output Connector [VIDEO OUT]**
For direct connection to a video monitor or another video recorder if desired. Not used with a conventional TV receiver.

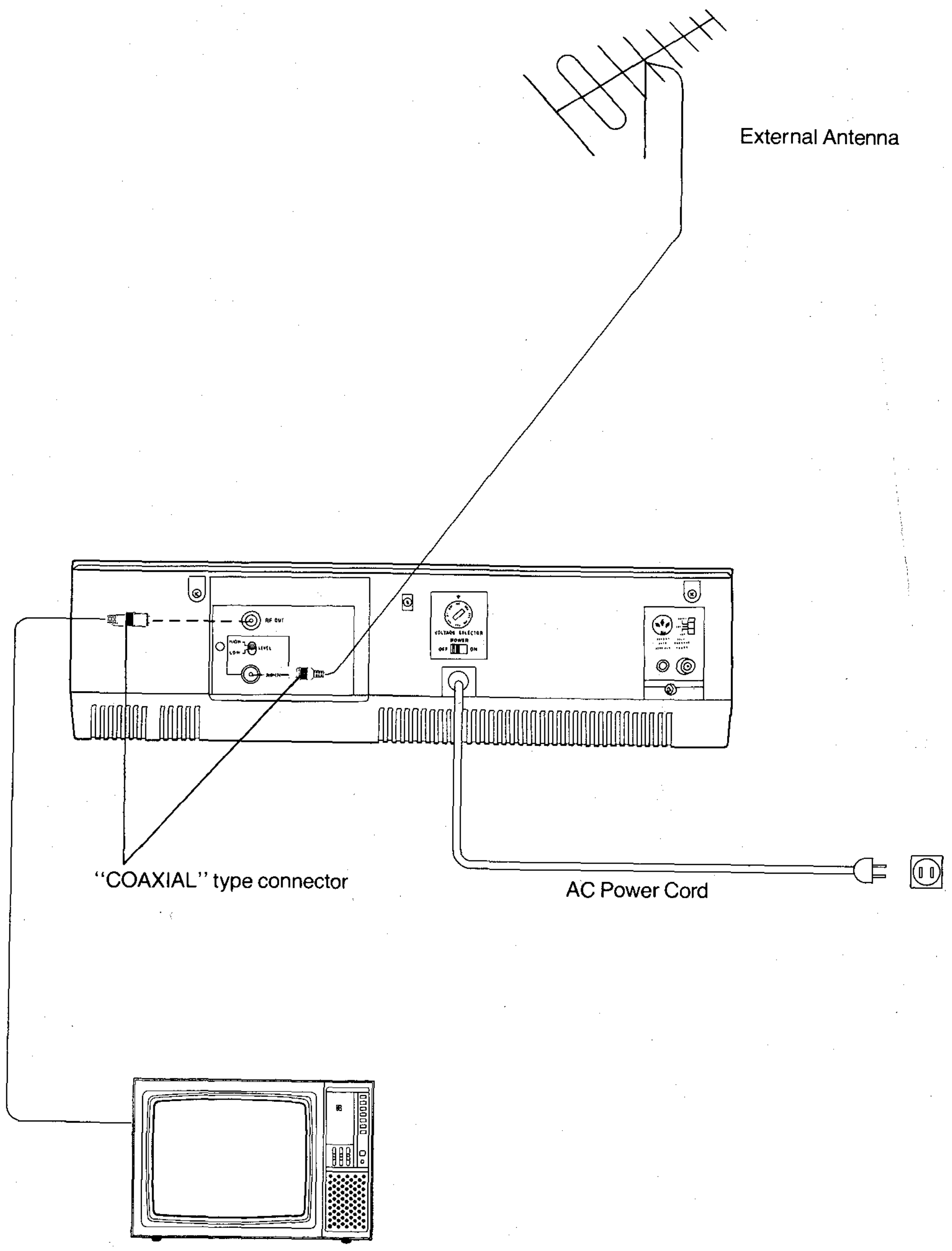
㊶ **Colour Mode/Test Signal Switch [COLOUR/TEST SIGNAL]**
This switch has the following 2 functions: (1) to tune the playback image correctly on the TV set, and (2) to stabilize the colour image during recording or playback.
This switch should normally be set to the "AUTO" position.
To adjust the playback image (RF output channel):
To tune the VHS RF output channel on your TV set, move this switch to the "TEST" position.
To stabilize the colour image:
Move this switch to the "COLOUR" position to make the recording in the stabilized colour mode, if necessary in a place where the supplied current is extremely low.
For playback, this switch must be in the "COLOUR" position.

㊷ **Wireless Remote Connector [WIRELESS REMOTE]**
When the optional NV-A700 wireless remote controller is used, connect the 2 cables from the wireless remote controller adaptor to the terminals of the NV-7000 as follows:

- ●DIN (3-pin) connector to wireless remote connector on rear.
- ●8-pin connector to remote control terminal ㉒ on front.

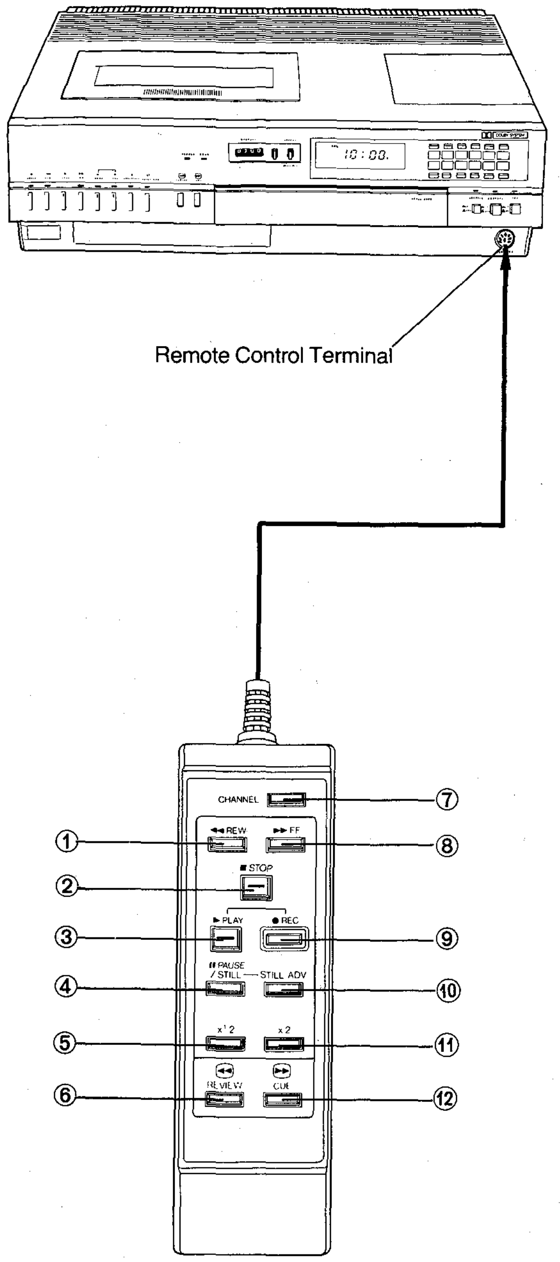
ANTENNA CONNECTION

Connect the external antenna, and the TV to the recorder as shown in the diagram.



TV Set

USING THE REMOTE CONTROL UNIT



Remote Control Unit

Various operations may be performed from a distance with the included Remote-Control Unit. (The cord length is approximately 5 meters.)

① **Rewind Button**
Used to rewind the tape.

② **Stop Button**
Used to stop the movement of the tape.

③ **Play Button**
Used to playback the tape.

④ **Pause Button**
Used to temporarily stop (pause) the tape when recording, or in order to see a still image during playback.

⑤ **Slow-Motion Button**
When this button is pushed during playback, the tape speed will be slowed to one-half of the normal speed.

⑥ **Review Button**
When this button is pushed and held down, the tape will playback in reverse.

⑦ **Channel Selector**
Each time this button is pushed, the Channel Indicator Lamp on the unit advances one channel to the right.
During recording, the unit is locked into one channel and cannot be changed. If, however, the tape is temporarily stopped during recording, the channel lock is cancelled and the channel may be changed.

⑧ **Fast-Forward Button**
Used to advance the tape at fast speed.

⑨ **Record Button**
When this button and the Play Button are pushed simultaneously, the unit will begin recording.

⑩ **Still-Frame Advance Button**
This button is used to advance the image one frame at a time when the unit is in the still-playback operation mode.

⑪ **Double-Speed Play Button**
When this button is pushed during playback, the tape will playback at two times the normal speed.

⑫ **Cue Button**
When this button is pushed and held down during playback, the tape will be played back at fast speed.

Notes:

- Slow-motion playback, double-speed and still-frame advance playback are possible only when the remote-control unit is used.
- A slight interference occurs during slow-motion playback and double-speed playback of tapes which were recorded on another type of unit.

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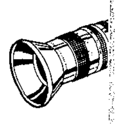
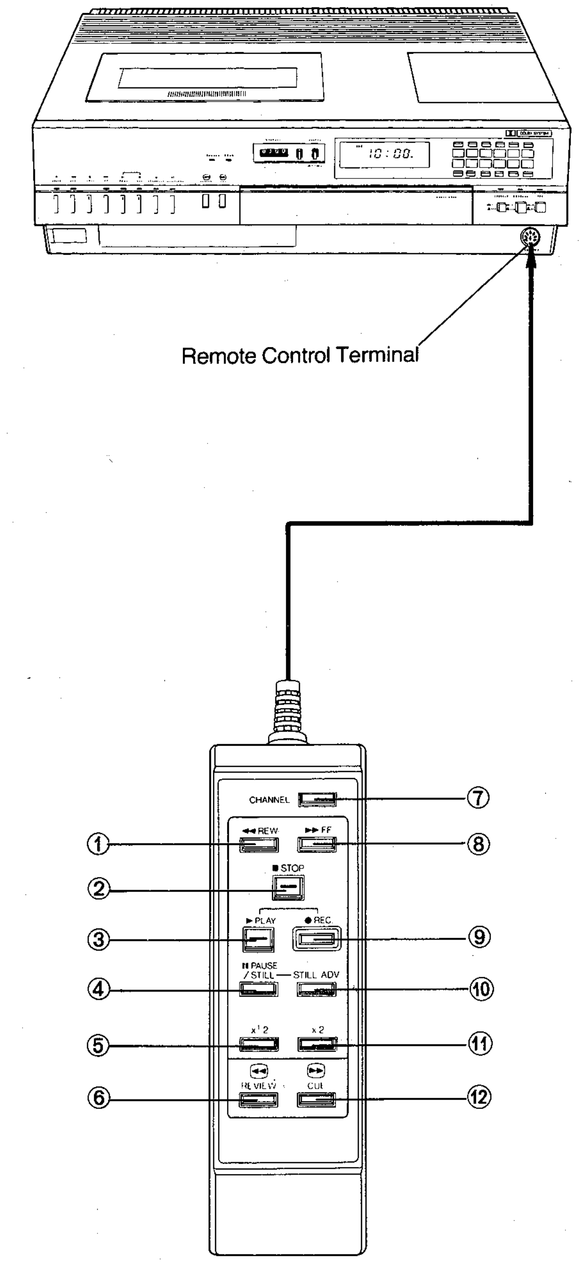


Video

USING THE REMOTE CONTROL UNIT



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- A slight interference occurs during slow-motion playback and double-speed playback of tapes which were recorded on another type of unit.

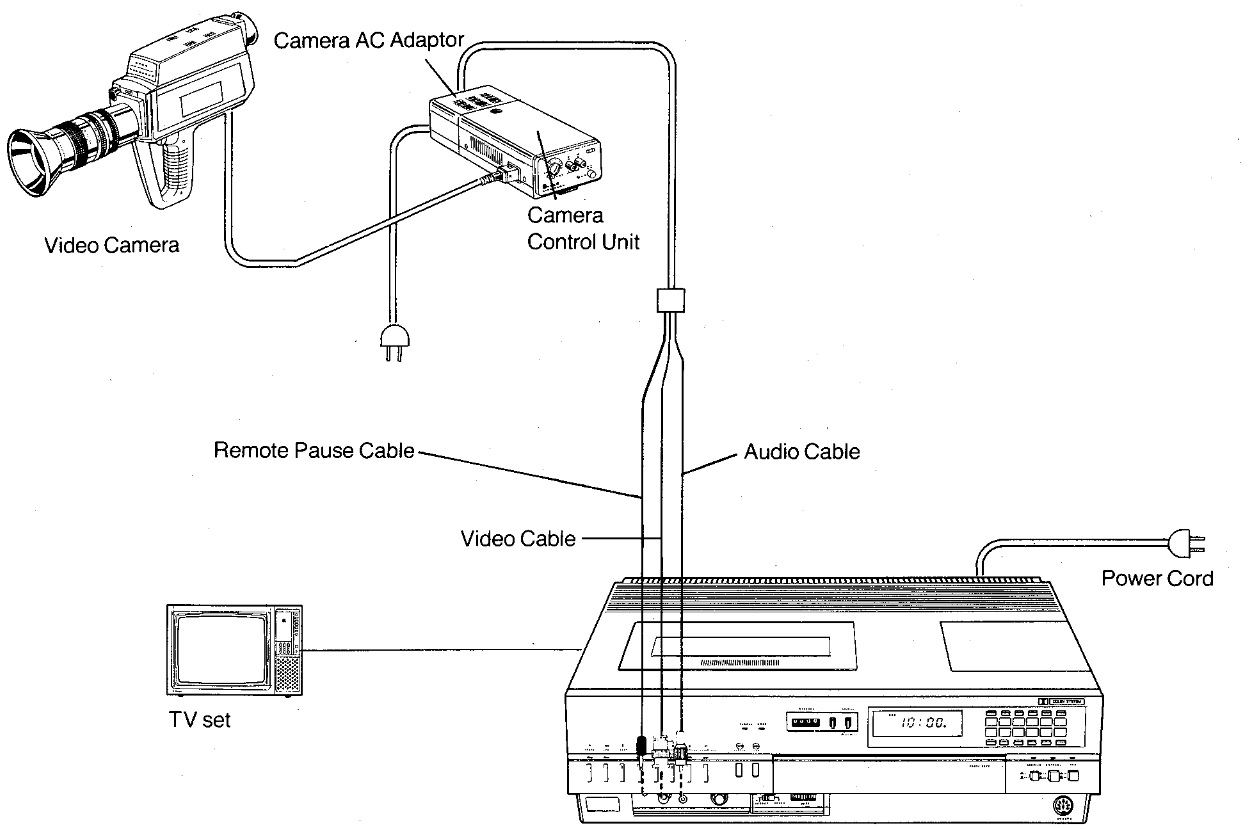
USING THE NV-7000 WITH AN OPTIONAL VIDEO CAMERA

The NV-7000 may be used with an optional video camera.
For the best result, please refer to the operating instructions of the camera you are using.
The diagram shown below indicates the way in which a camera can be connected, including the remote pause for use during recording.

Notes:

- The antenna connection may remain connected when using the camera.
- The Input Signal Selector must be on "CAMERA".
- Do not connect both the microphone and audio (line) inputs to the recorder at the same time.
  If this is done, just the microphone will be recorded.

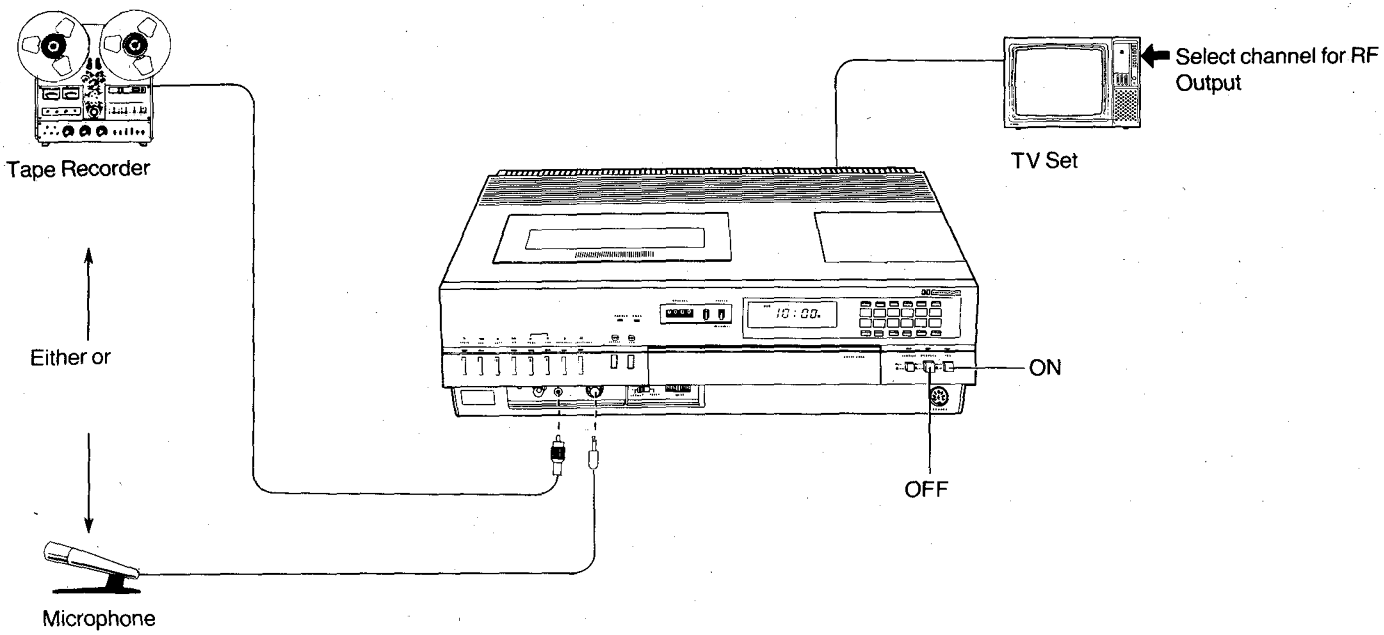
CONNECTION DIAGRAM



AUDIO DUBBING

AUDIO DUB offers the facility of adding your own commentary or background music to your recordings at a later date.

Connect the recorder as shown below.



1. **Set the Input Signal Selector to CAMERA.**
2. **Push the Play Button.**
3. **Push the Audio Dubbing and Play Buttons at any desired part.**

Notes:

- When an audio dub is made, the previous audio track is erased so that the new audio can be recorded.
- Avoid having a microphone connected to the Mic Input Jack on the front panel at the same time that an audio signal is connected to the Audio Input Jack. If this happens, just the microphone will be recorded.
- If using the microphone for dubbing, do not get the microphone near the speaker on the TV while the dub is being made. A howling noise (feedback) may occur.
- If the tab is removed from the rear side of the video cassette, no audio dubbing can be made.

ORDER NO. VRD-8005-393

Service Manual

Video Cassette Recorder

Vol. 2

Panasonic VHS

NV-7000-E -B

Electrical Adjustment Procedures

Mechanical Adjustment Procedures

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NV-E180 Approx. 258m, 180 min.
NV-E120 Approx. 174m, 120 min.
NV-E60 Approx. 88m, 60 min.
Video camera, WV-3300E
Wireless remote controller, NV-A700
Microphone

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

CONTENTS

SPECIFICATIONS .... COVER
MECHANICAL ADJUSTMENT PROCEDURES 2-1
  DISASSEMBLY OF CABINET PARTS 2-1
    1.DISASSEMBLY FLOWCHART 2-1
    2.DETAILED DISASSEMBLY METHOD 2-1
  MECHANICAL MAINTENANCE PROCEDURS 2-3
    1.ADJUSTMENT OF SAFETY SWUTCH 2-3
    2.POSITION ADJUSTMENT OF TENTION POST 2-4
    3.CONFIRMAT/ADJUSTMENT OF BRAKE TORQUE 2-4
    4.CONFIRMATION OF TAKEUP TORQUE 2-5
    5.MEASURMENT AND ADJUSTMENT OF BACK TENTION 2-6
    6.HEIGHT ADJUSTMENT OF REEL TABLE 2-6
    7.HEIGHT ADJUSTMENT OF TAPE GUIDE POSTS 2-7
    8.HEIGHT ADJUSTMENT OF PULL OUT POST 2-8
    9.CONFIRMATION OF ENVELOPE OUTPUT 2-9
    10.HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD 2-10
    11.CONFIRMATION 2-10
    12.ADJUSTMENT OF CASSETTE HOLDER 2-12
    13.ADJUSTMENT OF CAM GEAR AND MODE SELECT SWITCH 2-12
ELECTRICAL ADJUSTMENT PROCEDURES 2-17
  Test Equipment 2-17
  Adjustment Procedures 2-17
    1.Power Supply Section 2-17
    2.Still Section 2-17
    3.Servo Control Section 2-20
    4.Video & Colour Section 2-23
    5.Audio Section 2-28
      TV Demodulator Section (NV-7000E) 2-29
      TV Demodulator Section (NV-7000B) 2-32
      Adjustment RF Convertet 2-35

MECHANICAL ADJUSTMENT PROCEDURES

DISASSEMBLY OF CABINET PARTS

1. DISASSEMBLY FLOWCHART

This flowchart indicates disassembly steps of the cabinet parts and the PC Boards in order to find the item(s) necessary for servicing.
When reassembling, perform the step(s) in the reverse order.

Notes:
1. When removing the Front Panel, work with care not for breaking the locking portion of the panel.
2. The adjustment is required when the Cassette Guide was replaced.

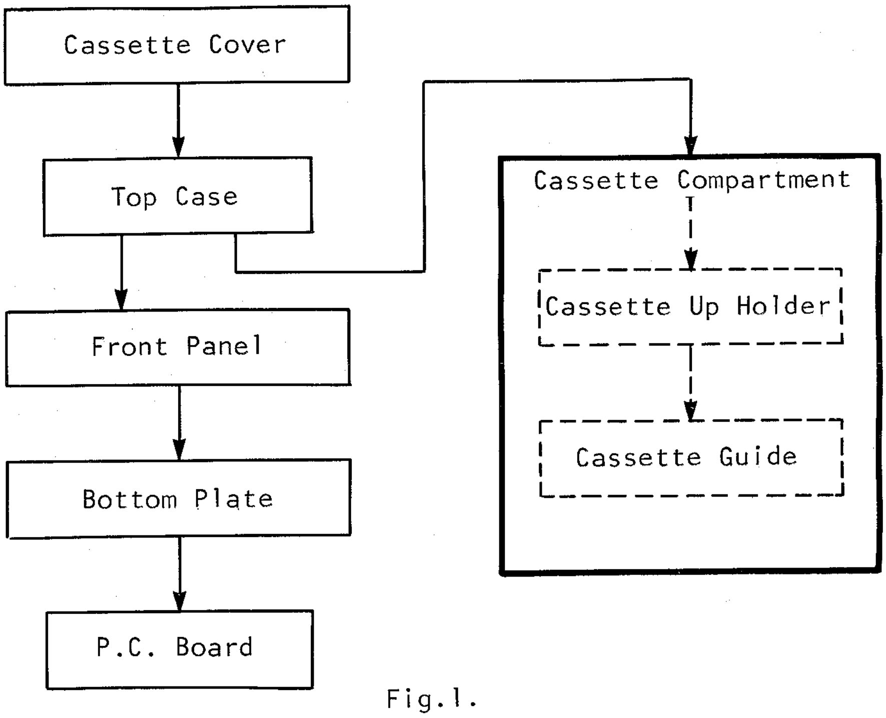

Cassette Cover
Top Case
Front Panel
Bottom Plate
P.C. Board
Cassette Compartment
Cassette Up Holder
Cassette Guide

Fig.1.

2. DETAILED DISASSEMBLY METHOD

2-1. Removal of the Cassette Cover
Remove 2 screws (A). Then lift the cassette cover.

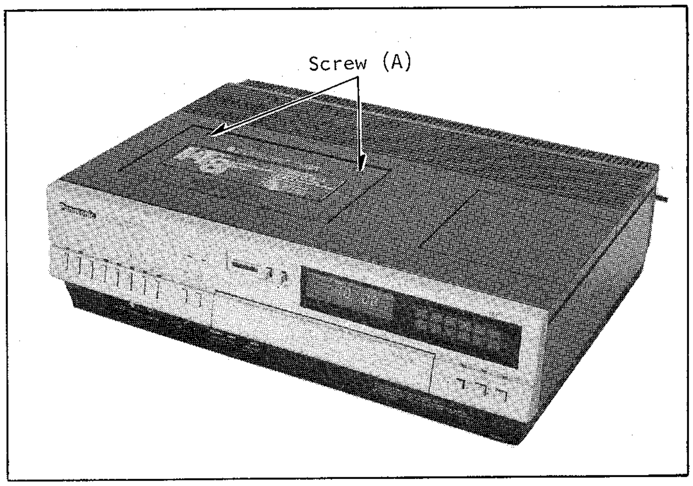


Fig.2.

2-2. Removal of the Top Case
Remove 2 screws (B). Then carefully lift the rear portion and pull it toward the rear of deck to remove.

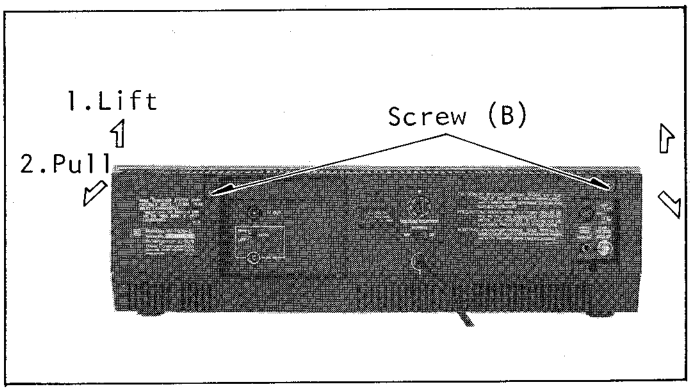

1.Lift
2.Pull
Screw (B)

Fig.3.

2-3. Removal of the Front Panel
Remove 3 screws (C). Then hold the top portion of the panel and turn it toward the front of the deck to remove.

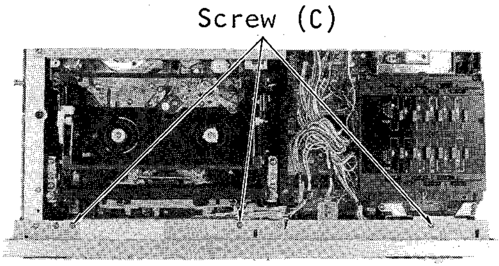


Fig.4.

2-4. Removal of the Cassette Compartment
Since the adjustment is not required when reinstalling the cassette compartment unless the screw located on center was loosened or removed, remove the entire cassette compartment for servicing or adjustments of parts under it.
Remove 2 screws (D) on each side and remove the Cassette Compartment (Cassette Up Holder and Cassette Guide).

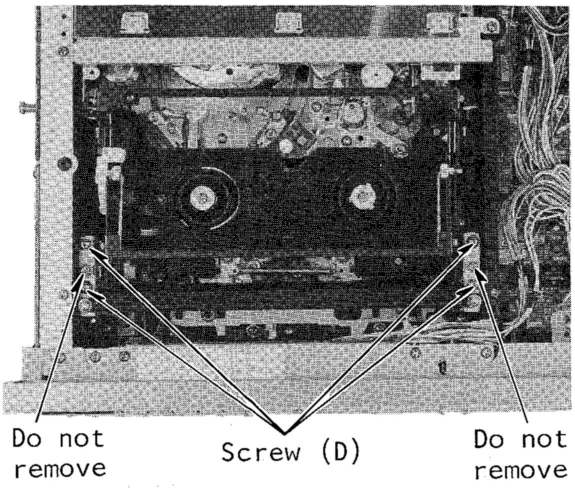


Fig.5.

Note: Do not remove screws paint locked. (located on center)

2-5. Removal of the Cassette Guide
In case only the cassette guide requires replacement or removal, remove a screw (E) on each side.

Note: Unless the cassette up holder unit is installed, this part should not be installed because the adjustment is required. When reinstalling, insert the cassette tape and ensure the clearance between tape and projections on the cassette guide is more than 1 mm.

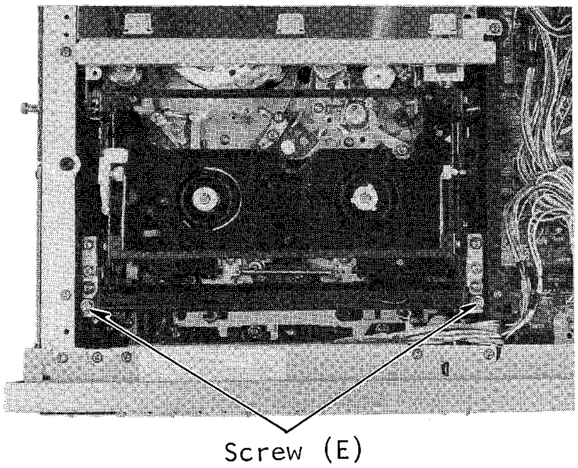


Fig.6.

2-6. Removal of the Bottom plate
Place the deck up side down so the bottom side faces upward. Then remove the 6 screws (F) to remove.

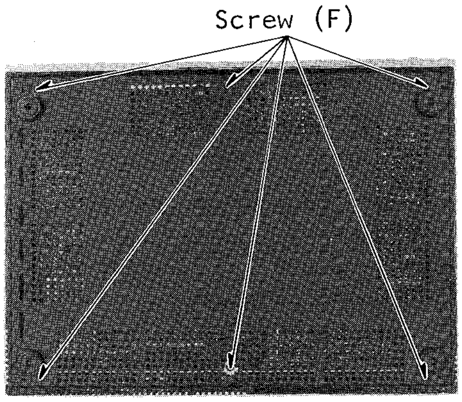


Fig.7.

Note: Place the cushion under the deck for not being damaged the top portion of the deck.

2. POSITION ADJUSTMENT OF TENSION POST

* Equipment Required:
Tension Post Adjustment
Plate .... (VFK0187)
Fine Adjustment Screw-
driver .... (VFK0136)

1. Remove the top case and cassette compartment.
2. Blind the supply photo transistor with opaque paper and press the cassette lock lever down to simulate the condition cassette tape is lowered.

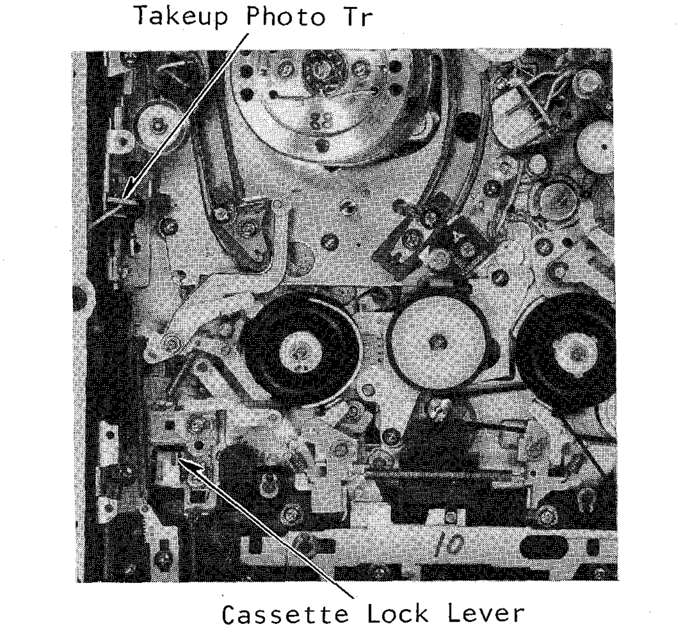


Fig.11.

3. Turn power switch on and push the play button for loading. As soon as the loading is completed plug off.
4. Place the adjustment plate and slightly loosen a screw securing the tention band braket.
5. Insert the fine adjustment screwdriver into the hole and move the tension band bracket in either of direction so the tension post just touches the fixture.

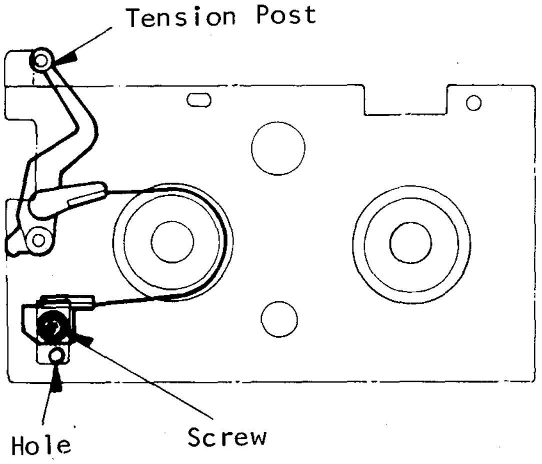
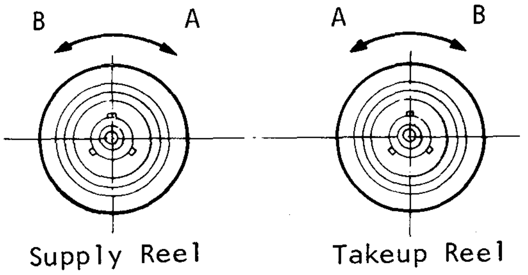


Fig12.

6. Upon completion of adjustment, ensure the cassette lock lever is unlatched before reinstalling the cassette compartment.

3. CONFIRMATION/ADJUSTMENT OF BRAKE TORQUE

A. Confirmation Procedure
Equipment Required:
Torque Gauge ... (VFK0133)
Adaptor for Gauge .. (VFK0134)



	A	B
Takeup	More than 450g-cm	70 ∿ 150 g-cm
Supply		

Fig.13.

1. Remove the top case and the cassette compartment.
2. Attach the adaptor to the torque gauge and place the deck in STOP mode.

2-7. Opening of the Bottom PC Board
Remove 6 screws (G). Push the front portion of PC Board in the direction indicated for being free the knobs and jacks located on the front, then lift the PC Board to open it.

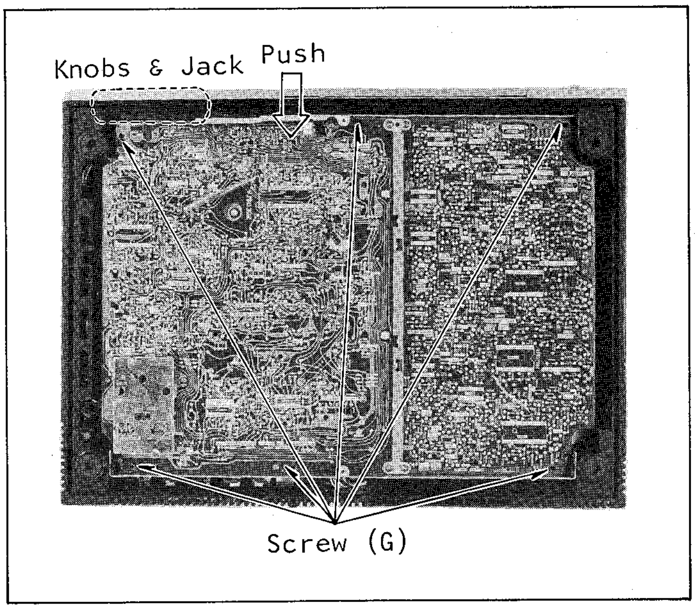


Fig.8.

1. ADJUSTMENT OF SAFETY SWITCH

* Specification
When the cassette tape with tab is used, switch turns on and without tab switch is kept off.

* Equipment required:
Cassette Holder Fixture (VFK0188)
Fine Adjustment Screwdriver (VFK0136)

1. Remove the Cassette Compartment.
2. Place the fixture and slightly loosen the screw (A).
3. Insert the adjustment screwdriver into the hole (B). Turn screwdriver in either direction till the switch turns on and tighten the screw (A).
   By turning screwdriver clockwise switch turns on, counterclockwise switch turns off.

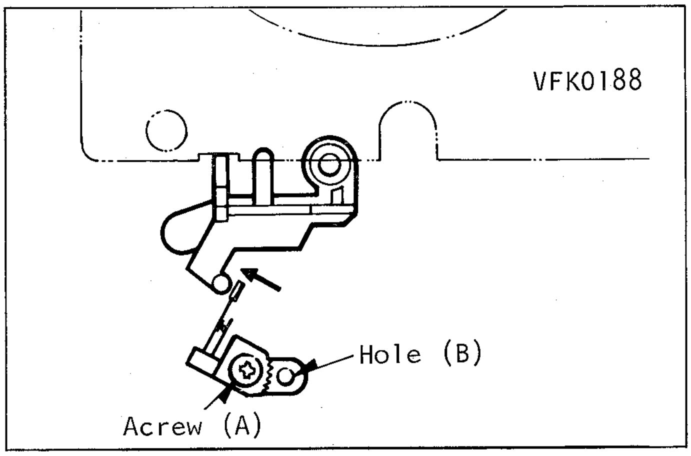


Fig.9.

4. Upon completion of adjustment, confirm that the switch turns on by using tape with tab and off without tab.

Note: The alignment tape can be used for confirmation by covering the broken tab. After confirmation by covering the broken tab. After confirmation, ensure the cover is removed.

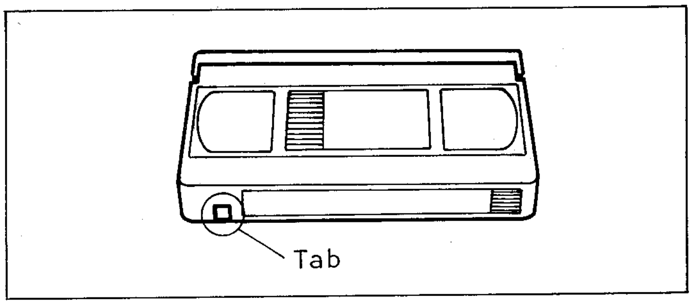


Fig.10.

3. Place the torque gauge on the reel table.
   The weight of gauge should be free against the reel table.

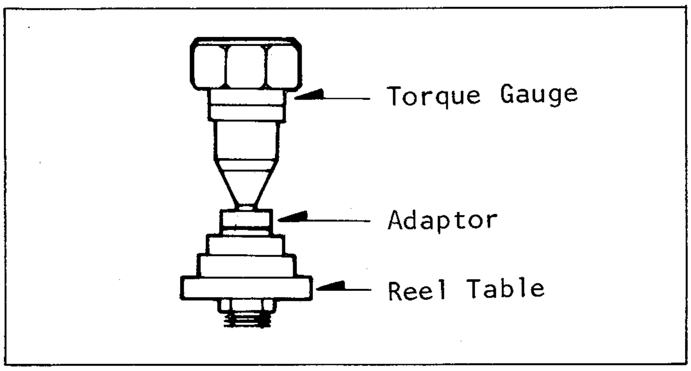


Fig.14.

4. Turn torque gauge in the direction indicated in the Fig. M13 until the brake begins slipping.

B. Adjustment Procedure
   To adjust the brake torque, change the notch.

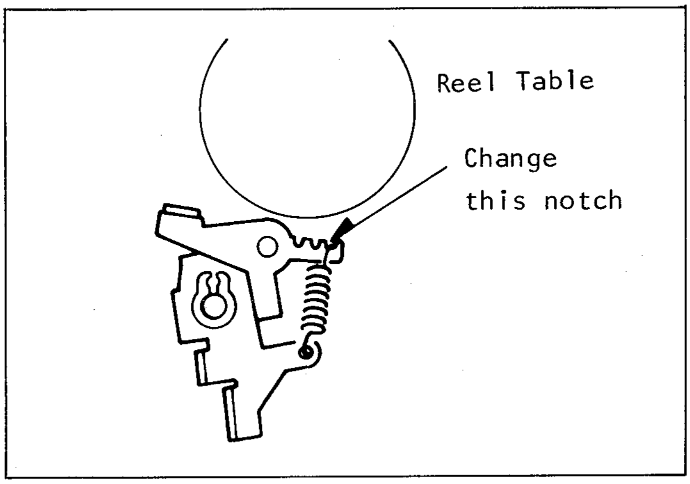


Fig.15.

Note: If proper brake torque could not obtained by changing the spring position, clean the rotating surface of the reel table with soft cloth and confirm torque before replace it.

4. CONFIRMATION OF TAKEUP TORQUE

* Equipment Required:
Dial Torque Gauge ... (VFK0133)
Adaptor for Gauge ... (VFK0134)

* Specification
in PLAY mode ... 120 ∿ 190 g-cm
in F.F. .... more than 400 g-cm
in REW .... more than 400 g-cm

1. Remove the top case and cassette cover.
2. Attach the adaptor to the torque gauge and blind the takeup and supply photo transistors (Q6552 and Q6551) with opaque paper. Lower the cassette up unit and turn power switch on.
3. Set a torque gauge to the Take-up Reel Table, push the play button and read torque on gauge. Also perform for F.F. mode by pushing the F.F. button.

Note: While measuring, the weight of gauge should not rest on reel table.

4. Set the torque gauge to the Supply Reel Table, press the rewind button for rewind mode.
5. Remove the opaque paper.

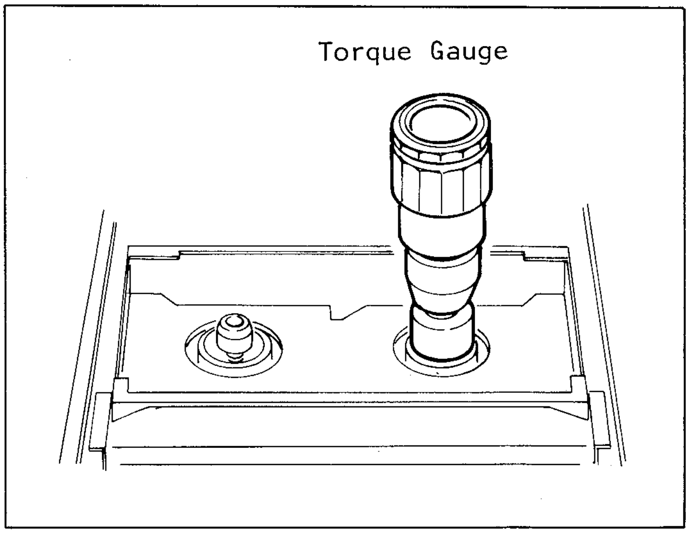


Fig.16.

Note: There are no-adjustment here.
If the torque readings are off considerably, rollers or idlers or reel tables may need replacement.

5. MEASUREMENT AND ADJUSTMENT OF BACK TENSION

A. Measurement Procedure

* Equipment Required:
Back Tension Meter (Tentelometer)
VHS Cassette Tape (120 minutes tape)

* Specification: 25 ∿ 30 g

1. Pull the erase head in the direction indicated by the arrow and hold it by adhesive tape.
2. Play back the cassette tape from its beginning and wait until tape running has stabilized. (for approx. 10 to 20 seconds)
3. Insert tension meter in tape path and confirm reading.

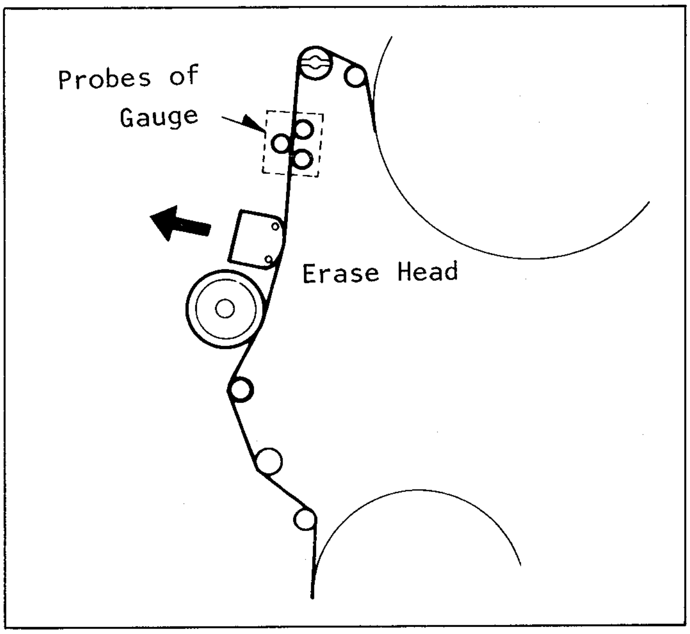


Fig.17.

Notes: 1. Make sure that the three probes of the meter are all in good contact with tape, but out of contact with supply inertia roller while measuring.
2. It is recommended to be measured three times as tension meter is very sensitive.

B. Adjustment Procedure

* Equipment Required:
Fine Adjustment Screw-driver .... (VFK0136)

1. Loosen a screw (A) and insert the fine adjustment screwdriver into the hole (B).
2. Move the adjustment plate in either of direction indicated by the arrow to obtain the specified tension. Turn the driver clockwise to raise tension, counter-clockwise to lower it.
3. Tighten the screw (A) and varify tension with the meter once again.

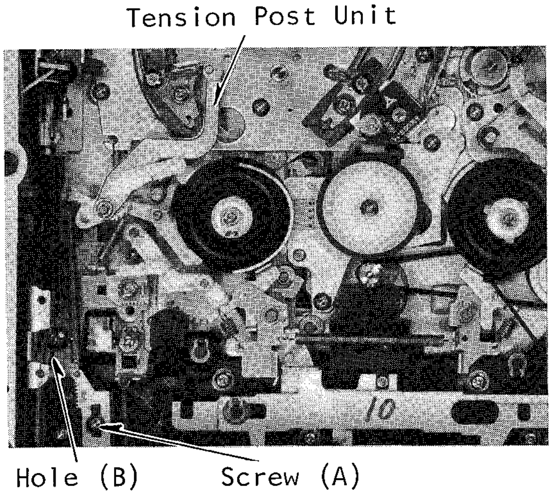


Fig.18.

Note: Upon completion of adjustment, remove the adhesive tape.

6. HEIGHT ADJUSTMENT OF REEL TABLE

* Equipment Required:
Post Adjustment Plate .. (VFK0191)
Reel Table Height Fixture .... (VFK0139)

* Specification .... 0 ∿ 0.2mm

1. Remove the Cassette Compartment.
2. Place the post adjustment plate, put the dial gauge on it and set the dial gauge to zero "0" with the condition that scraper of gauge touches the cut-out portion of the plate.

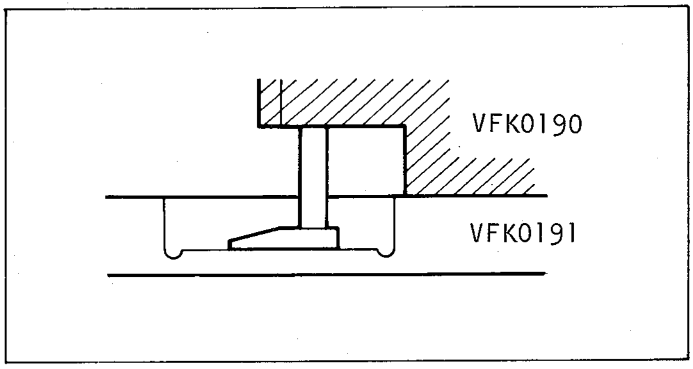


Fig.19.

3. Then measure the top portion of reel table and confirm the difference against the condition just performed in former step. Do same for the other reel table.

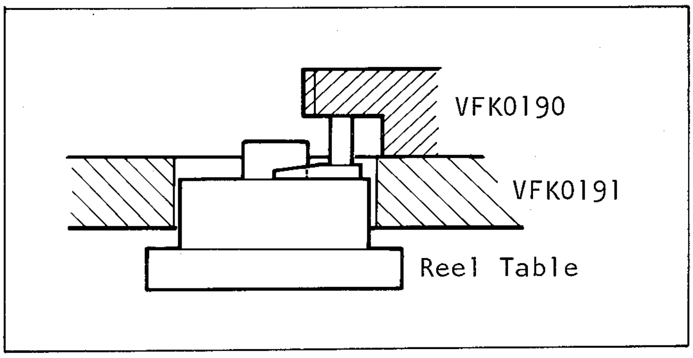


Fig.20.

4. If the difference is more than 0.1 mm (higher or lower), adjust the height of reel table to obtain the specified height.
5. For adjustment, change the poly-slider washer located under the reel table. (The washer is available in size of thickness, t = 0.13 mm, 0.25 mm and 0.5 mm).

7. HEIGHT ADJUSTMENT OF TAPE GUIDE POSTS

* Equipment Required:

Hex. Wrench, (0.9mm) ...	(VFK0146)
Post Adjustment Plate ..	(VFK0191)
Reel Table Height Fixture	(VFK0190)
Nut Driver	(Purchase locally)
Post Adjustment Screwdriver	(VFK0137)

1. Remove the cassette compartment and place the adjustment plate.

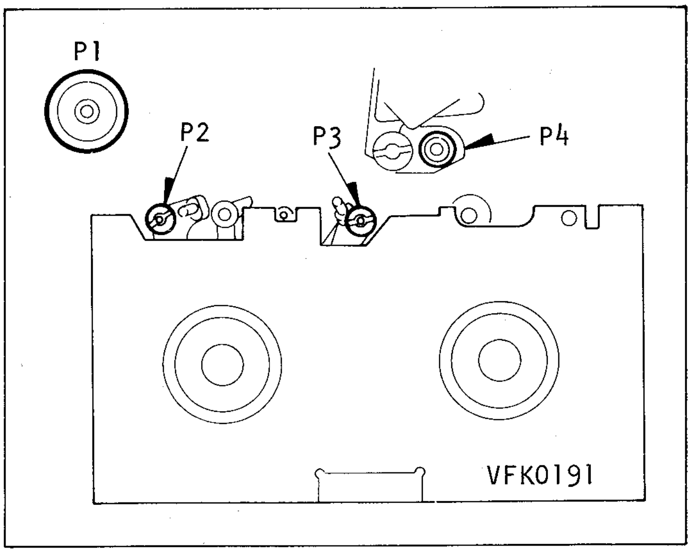


Fig.21.

2. First lower all posts so the condition of height becomes as shown. (Lower end of post, tape guide, should be lower than scraper.) Loosen a hex. screw located lower portion of posts (P2 & P3), then turn them.

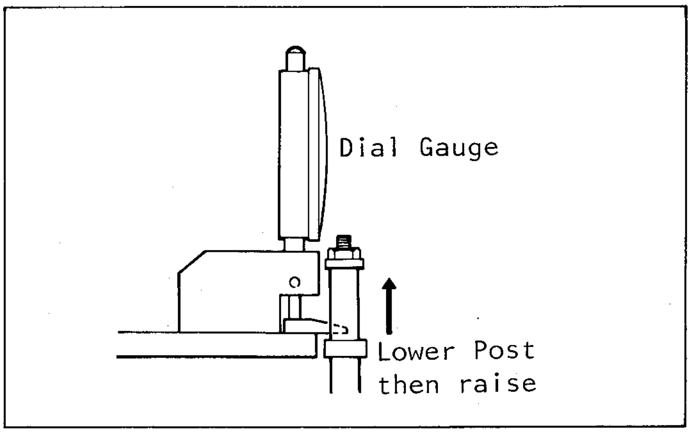


Fig.22.

3. Place the dial gauge on the adjustment plate and fit the scraper to the post. The condition to fit the scraper should be as shonw. (The scraper of gauge should be fully lowered till it touches the plate).

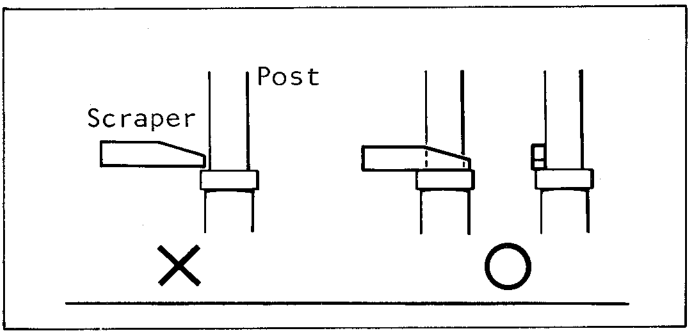


Fig.23.

4. Set the dial gauge to zero "0", and slowly raise the post until just the post is raised to touch the scraper.
   To adjust P1 and P4, use the nut driver.
   (The post cap on P4 can be removed by turning counter clockwise.)
   To adjust P2 and P3, use the post adjustment screwdriver.

Note: Upon completion of adjustment, tighten hex. screws on the P2 and P3 also install the post cap on Post 4.

8. HEIGHT ADJUSTMENT OF PULL OUT POST

Notes:
1. The adjustment should be performed after the adjustment of P4 as the spec is based on height of P4.
2. The adjustment should be performed in the loading completion mode.
3. Unless the replacement or adjustment of this post is required the adjustment nut should not be turned.

* Equipment Required
Post Adjustment Plate ... (VFK0191)
Reel Table Height Fixture .... (VFK0190)
Nut Driver .... (Purchase Locally)

* Specification .... 0.06±0.02mm

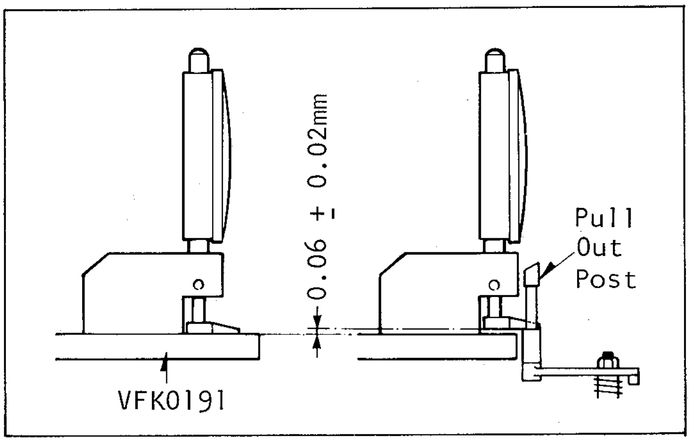


Fig.24.

1. Remove the cassette compartment.
2. Turn power switch on, press the cassette lock lever down, cover the supply photo transistor (Q6551) and push the play button for loading.
3. As soon as loading is completed plug off.
4. Place the adjustment plate, put the height fixture on the plate and set dial guage to zero "0" with condition the scraper touches on the plate.

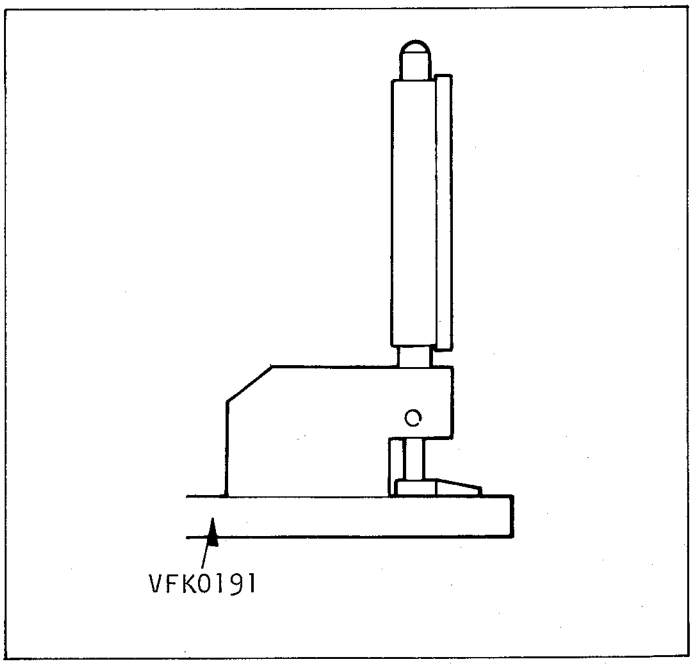


Fig.25.

5. First, slightly lower the post by turning the nut clockwise. Fit the scraper to the post so the condition becomes as shown.

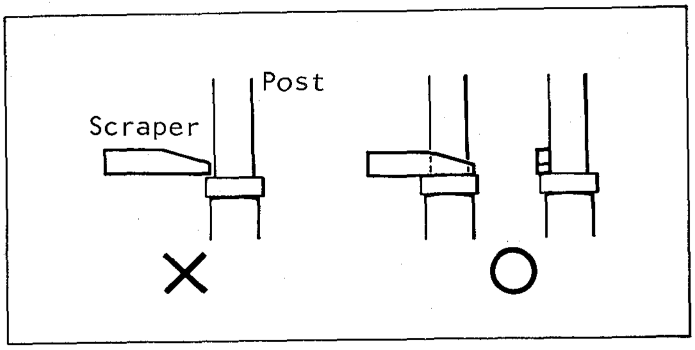

Post
Scraper
×
○

Fig.26.

6. Then slowly and slightly turn the nut till the gauge reads specified height.
7. Remove the tape covering the photo transistor and plug in for unloading before reinstall the cassette compartment.

9. CONFIRMATION OF ENVELOPE OUTPUT

* Equipment Required

Alignment Tape	(VFM8100H3D)
Post Adjustment Screwdriver	(VFK0137)

1. Set the tracking control into the detent (fixed) position.
   And connect the oscilloscope to the TP3016 or Pin No. 10 of IC3002.

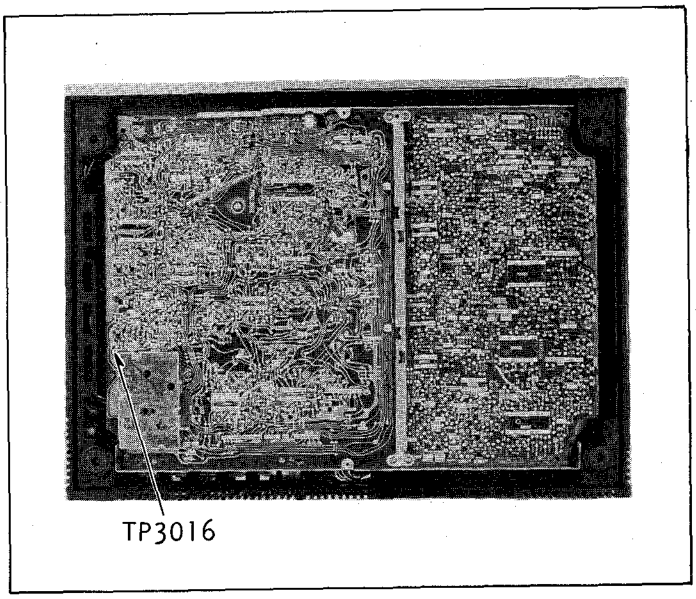


Fig.27.

2. Play back the monoscope portion of the alignment tape VFM8100H3D, adjust posts P2 and P3 by watching the scope display (Envelope of TP3016 on Main PC Board) so the RF envelope on the scope becomes as flat as possible.
   ($V1/V\text{-max} \geqq 0.7$, $V2/V\text{-max} \geqq 0.8$)

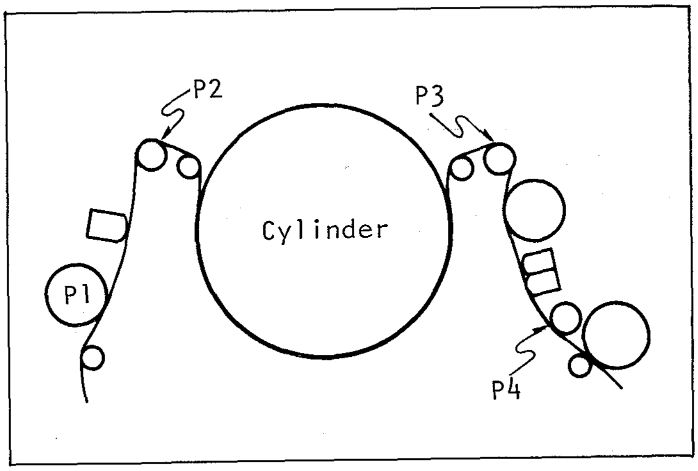

P2
P3
Cylinder
P1
P4

Fig.28.

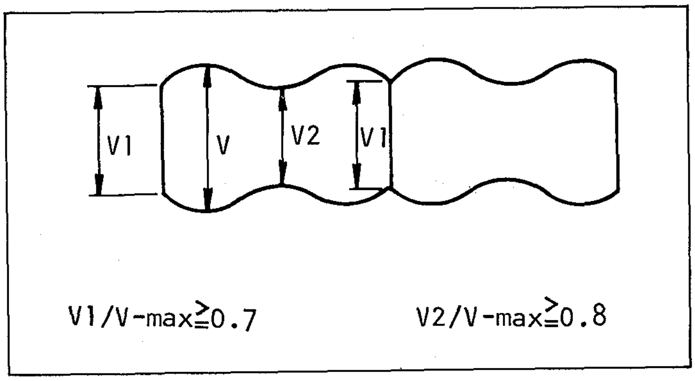

V1
V
V2
V1
V1/V-max≧0.7
V2/V-max≧0.8

Fig.29.

3. When the scope display is as follows, adjust the height of P2 shown below.

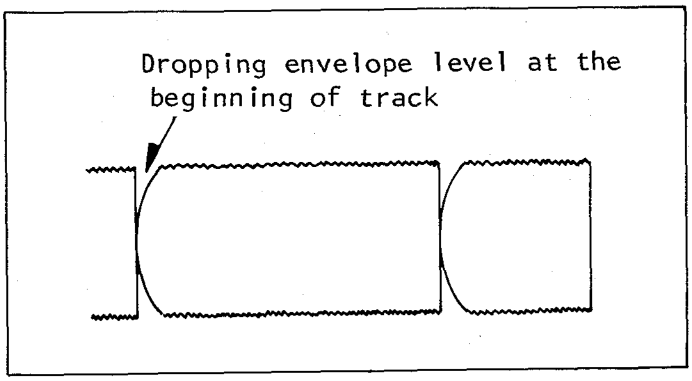

Dropping envelope level at the beginning of track

Fig.30.

4. When the scope display is as follows, adjust the height of P3 shown below.

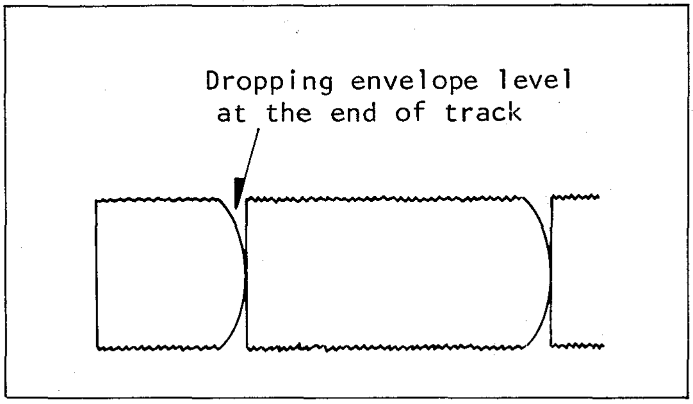


Fig.31.

5. The scope display with P2 and P3 adjusted correctly should become as shown below.

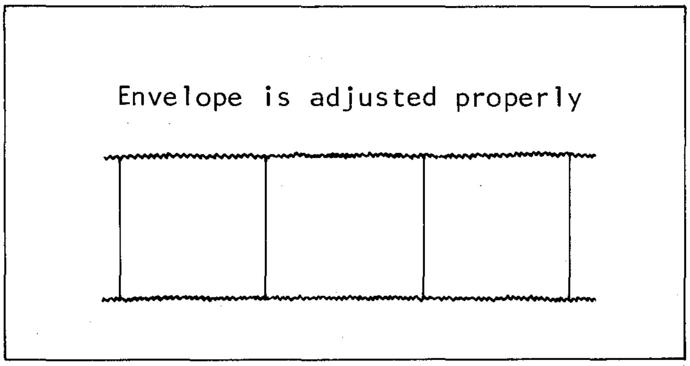


Fig.32.

6. When the adjustment is required, turn the top of post with the post adjustment screwdriver.

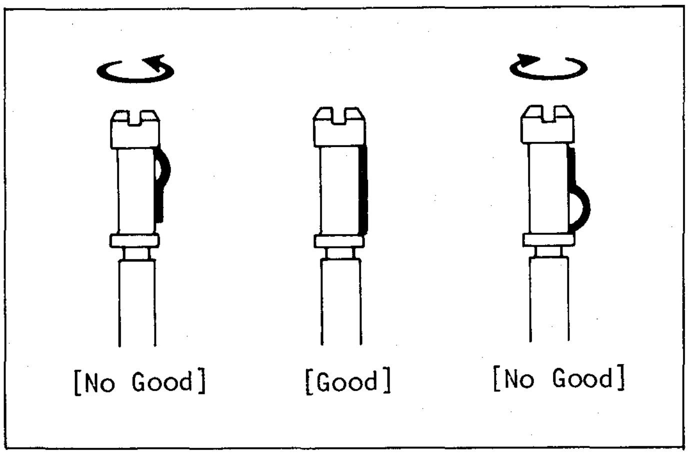


Fig.33.

10. HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD

* Equipment Required:
H-Position Adjustment Screwdriver (VFK0189)

1. Set the tracking control into the detent (fixed) position. And connect the oscilloscope to the TP3016.
2. Playback the monoscope portion of the alignment tape VFM8100H3D and confirm the envelope figure.
3. If the adjustment is required, set the H-position adjustment screwdriver into the slot of the adjustment nut and rotate in either of direction to obtain maximum envelope output.

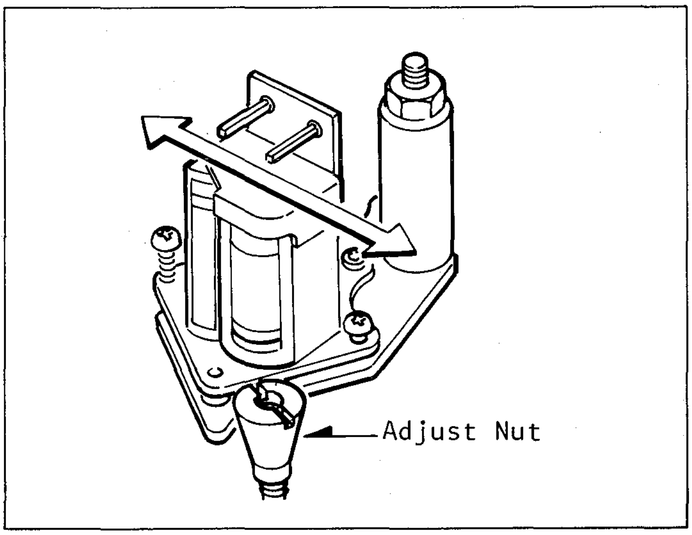


Fig.34

11. A. Confirmation - (1)

Note: Unless the A/C Head is replaced, this procedure should not be done.
Looking at the lower edge of the control head with the tape running, ensure the lower edge of tape runs along the lower edge of the control head.
If it doesn't, just slightly turn the nut (A) in either directions to correct it. Turn clockwise to lower the head and counter-clockwise to raise it.

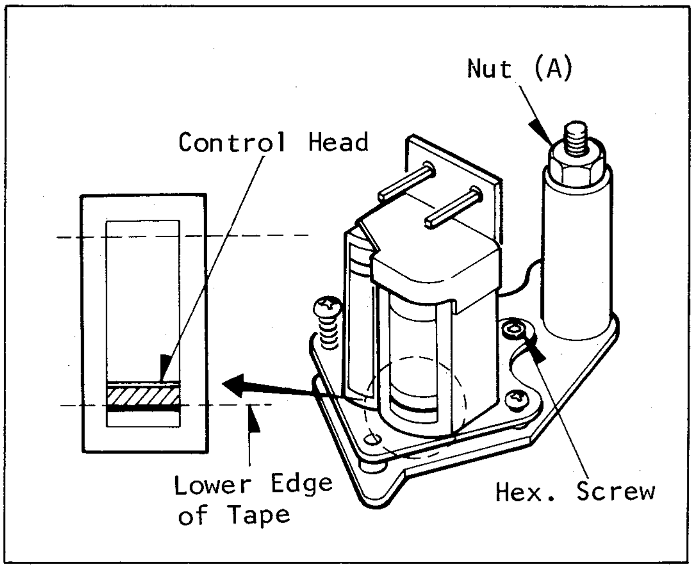

Nut (A)
Control Head
Lower Edge of Tape
Hex. Screw

Fig.35.

B. Confirmation - (2)

Note: Unless the Post-4 is pre-adjusted, this procedure should not be done. (Refer to the section of "HEIGHT ADJUSTMENT OF TAPE GUIDE POSTS").

* Equipment Required:
Hex. Wrench, (1.5 mm) .. (VFK76)
Playback the tape and confirm the tape runs between lower and top limiters of the post. If the lower edge or top edge of the tape turns with waving or frilling, then correct the tilt of the A/C head by turning a hex. screw. (A hex. screw indicated in Fig. 35).

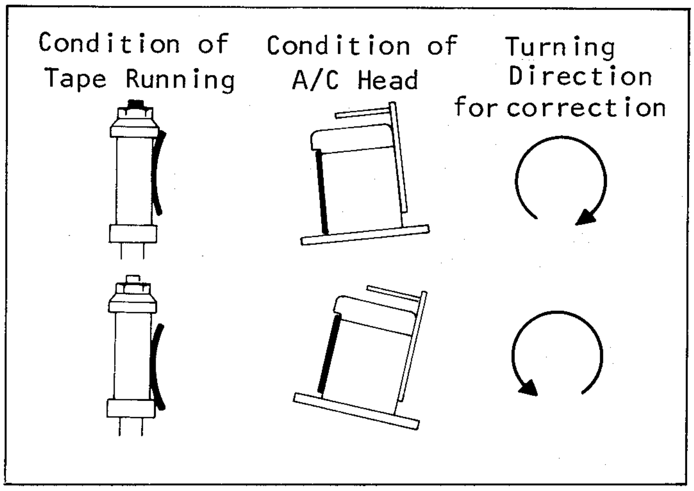

Condition of Tape Running
Condition of A/C Head
Turning Direction for correction

Fig.36.

11-2. A/C HEAD HEIGHT ADJUSTMENT - (2)

* Equipment Required:
VHS Alignment Tape .. VFM8100H3D
Hex. Wrench (1.5mm) . VFK76

1. Connect the oscilloscope to the audio output on the rear of the deck.
2. Playback the monoscope portion (1 kHz, Audio) of the alignment tape, VFM8100H3D.
3. Adjust the hex. screw and a screw without spring on the head base so the output level becomes maximum.

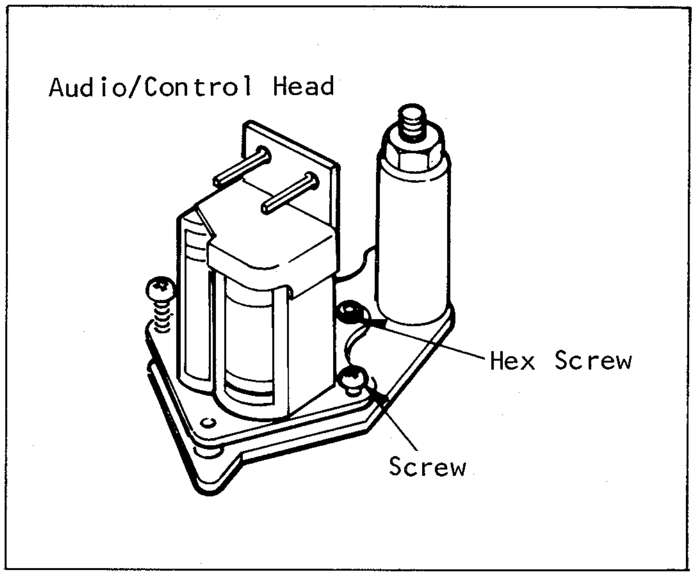

Audio/Control Head
Hex Screw
Screw

Fig.37.

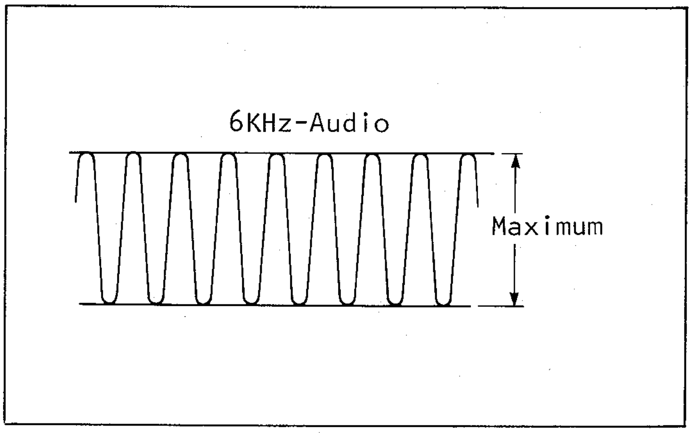


Fig.38.

11-3. TILT ADJUSTMENT OF A/C HEAD

1. Connect the oscilloscope to Test Point TP3016 on the Video Process PC Board.
2. Playback the monoscope portion of the alignment tape, VFM8100H3D and adjust the hex. screw so the RF envelope output level becomes maximum.

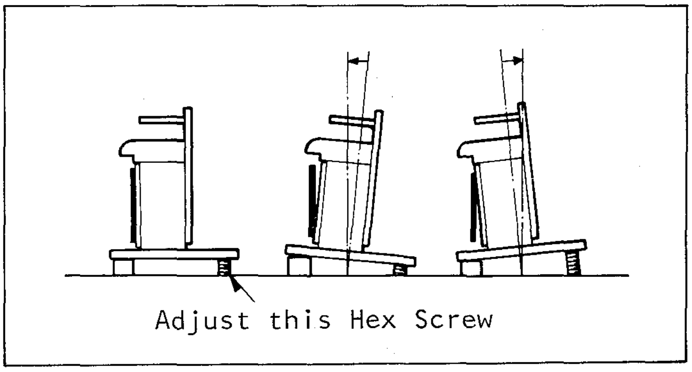


Fig.39.

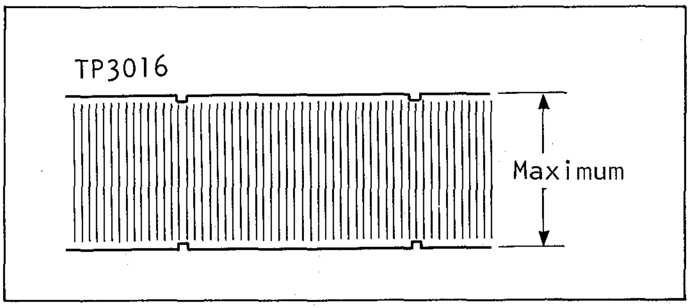


Fig.40.

12. ADJUSTMENT OF CASSETTE HOLDER

This adjustment is required only when the screw (A) was removed accidentally.

* Equipment Required:
Cassette Holder Fixture .. VFK0188

Note: Before adjustment, ensure the cassette lock lever is unlatched.

1. Remove the Cassette Guide and slightly loosen 6 screws (A) and (B). Keep the cassette holder ejected condition.
2. Insert the fixture and push all the way in till it touches the tabs on the cassette holder. Hold the fixture and cassette holder together with your hand, then slowly lower them with watching all holes and cut-outs till the cassette holder latches.

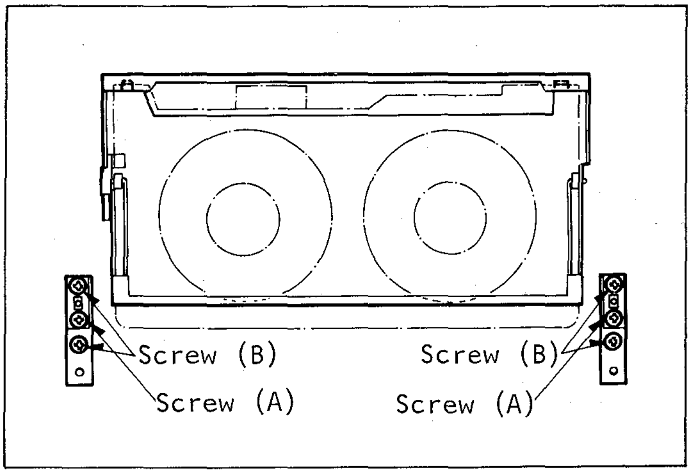


Fig. 41.

3. Press the center portion of the fixture down not for missing adjusted position then tighten 6 screws.
4. Supply power and ensure the smooth movement by repeating pressing down and ejecting of the cassette holder.

13. ADJUSTMENT OF CAM GEAR AND MODE SELECT SWITCH

General Condition:

The mechanism of this model is mostly engaged to the electrical circuit, System Control Circuit, through the mode select switch. Therefore the relation between the mode switch and the cam gear decides all further mechanical movement of the mechanical parts such as levers, gears, rollers and so on.
If the adjustment of this item is performed inproperly, the deck will be unloaded or compulsorily stopped. And it will result being damaged at any mechanical or electrical parts.

Adjustment Procedures:
1. Turn Loading gear clockwise until the post 2 and 3 were fully unloaded. The small projection on the loading gear will be top portion at the unloading condition.

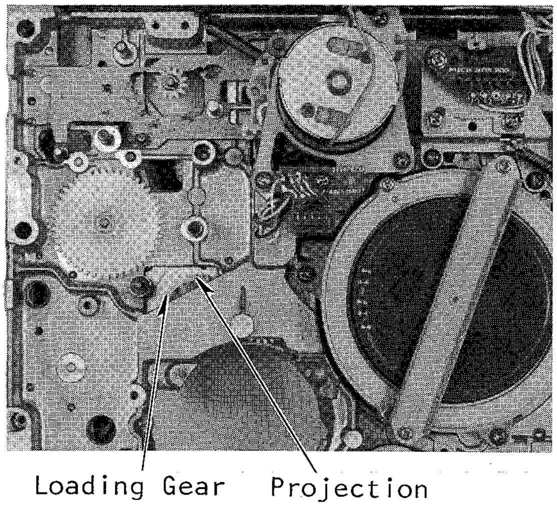

Loading Gear
Projection

Fig.42.

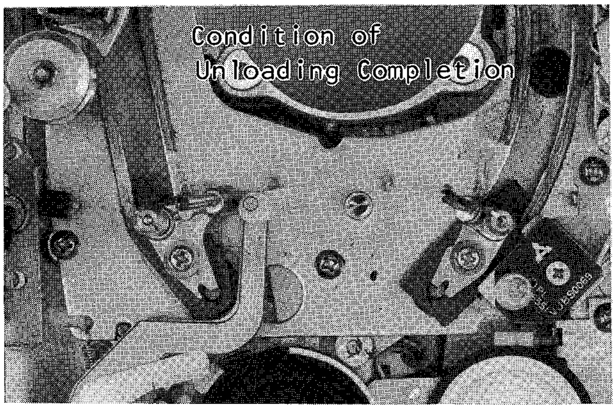

Condition of
Unloading Completion

Fig.43.

2. Install the action gear so the hole on the action gear meets the projection on the loading gear. Ensure that the loading gear is still fully unloaded condition.

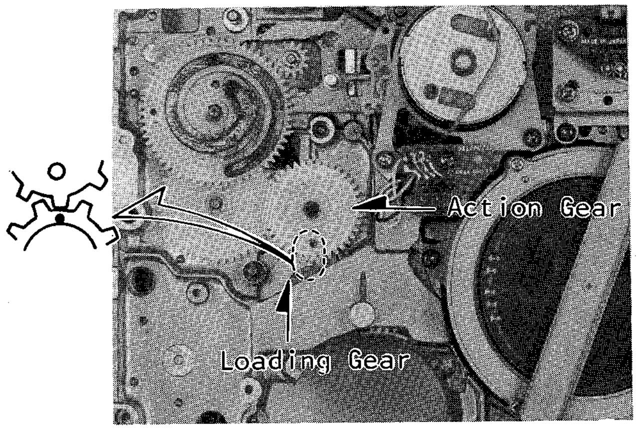

Action Gear
Loading Gear

Fig.44.

3. Slowly slide the main rod so the V-shaped mark meet the V-shaped mark of the mode select switch. This results main rod and mode select switch stop (unloading completion) mode.
4. Insert the cam gear so the hole (A) on the gear meets the hole on the main rod. To meet the two holes easier, use the small hex. wrench (VFK75) or metal pin. Also ensure the two V-shaped marks are fixed.

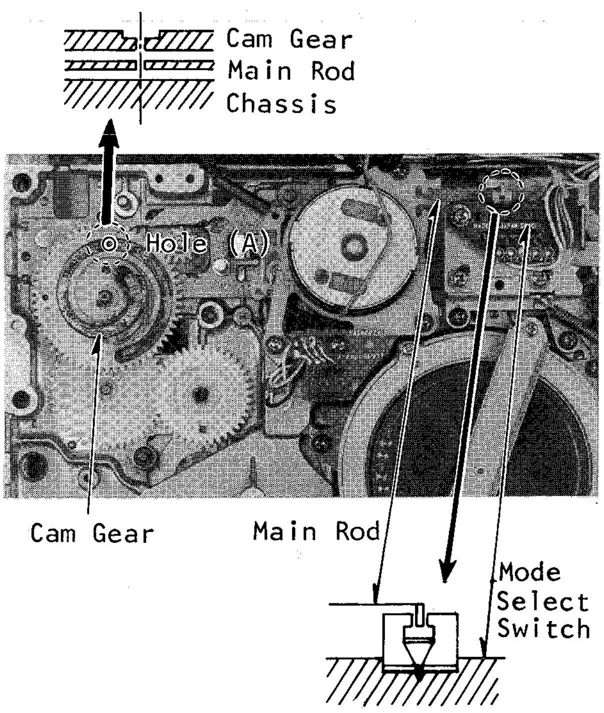

Cam Gear
Main Rod
Chassis
Hole (A)
Cam Gear
Main Rod
Mode
Select
Switch

Fig.45.

5. Install the sector gear so the pin on the sector gear meets the inner slot of the cam gear (simple slot side). And install 2 retaining rings to mount cam gear and sector gear.

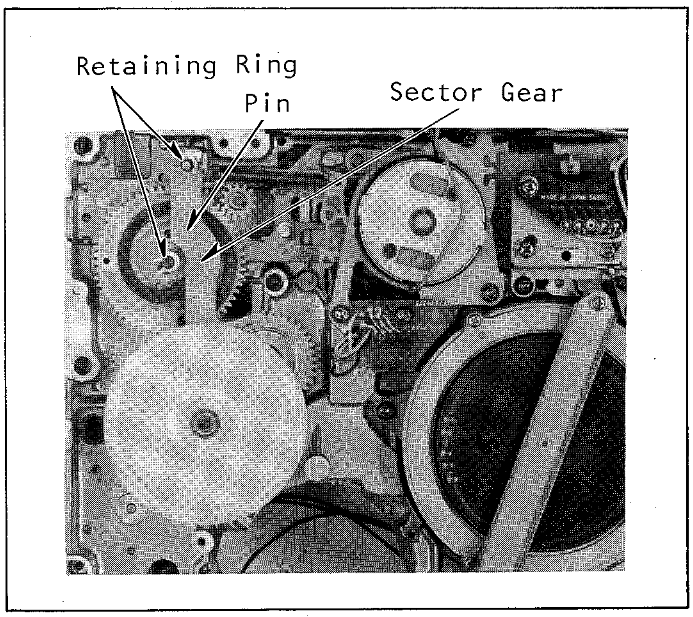

Retaining Ring
Pin
Sector Gear

Fig.46.

6. Final figure should become as illustrated below, and at the same time two V-shaped marks are fixed at the mode select switch.

7. Install the gear protector and tighten the nut for mounting it. And install the large gear so the teeth of it contact the outer teeth of the intermediate gear. Then install a retaining ring to mount it.

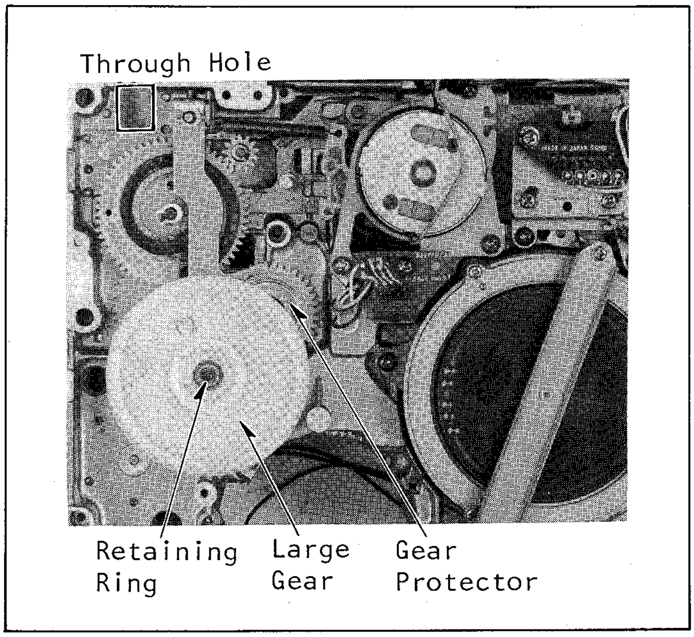

Through Hole
Retaining Ring
Large Gear
Gear Protector

Fig.48.

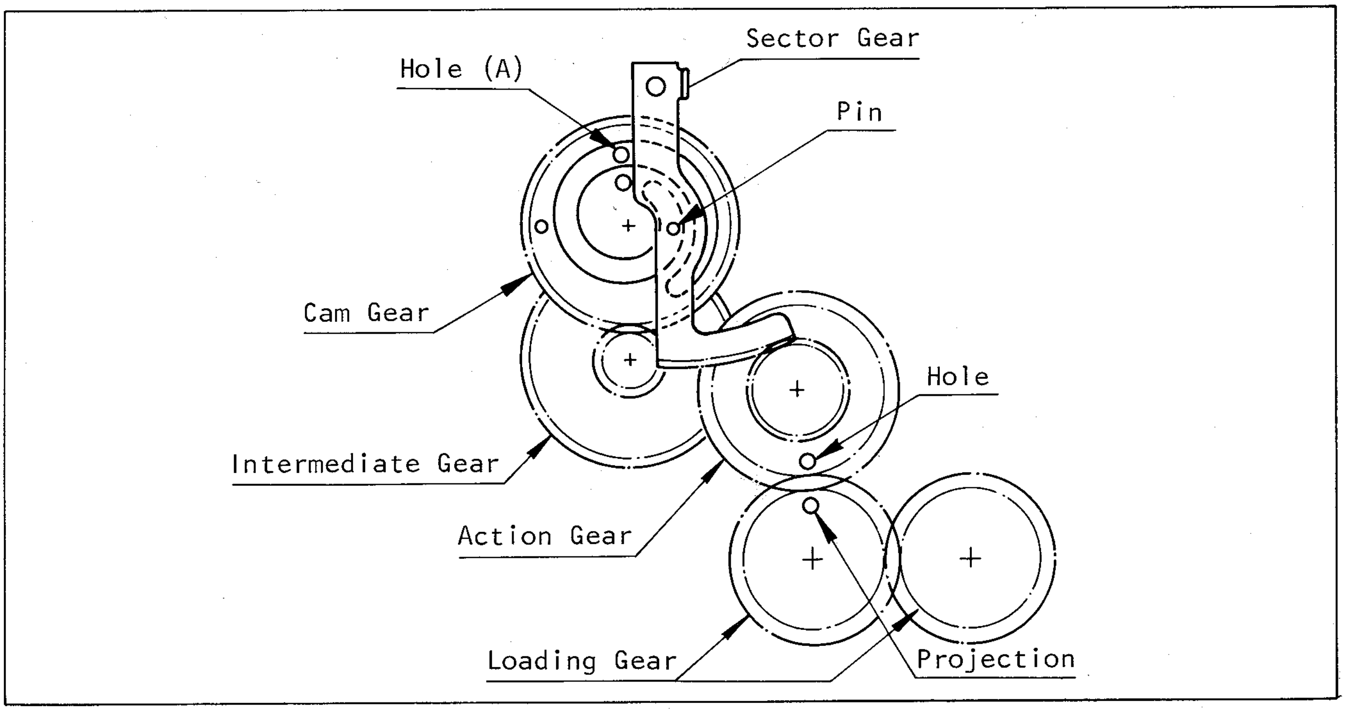

Sector Gear
Hole (A)
Pin
Cam Gear
Hole
Intermediate Gear
Action Gear
Loading Gear
Projection

Fig.47.

8. Set the cassette lock lever unit closed and install it from the through hole on the chassis shown above.

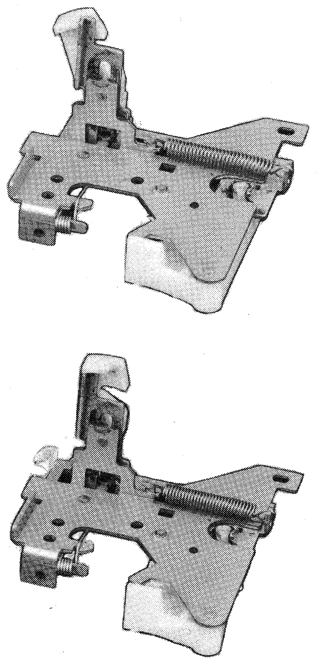


Fig.49.

9. Tighten 2 screws (B), install the belt and belt cover and tighten a screw (C). Turn the large pulley in both direction to confirm the smooth movement of this mechanism.

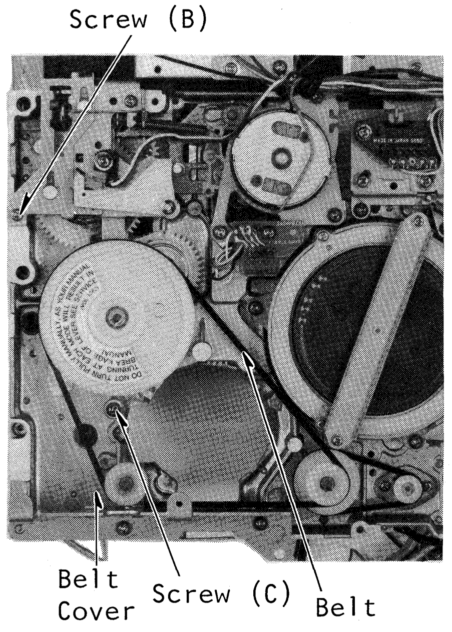
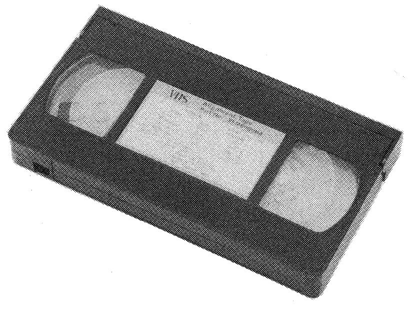
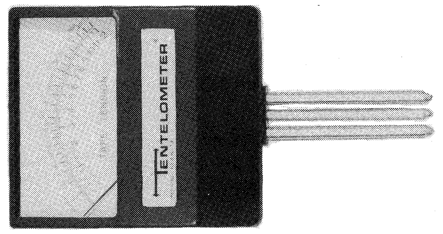
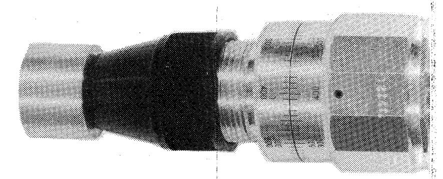
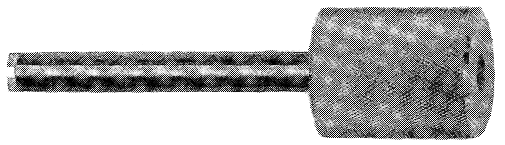
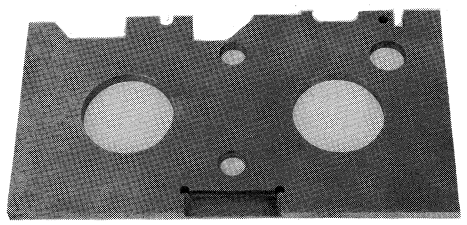
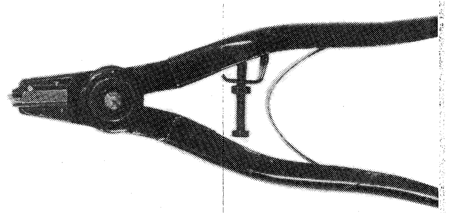
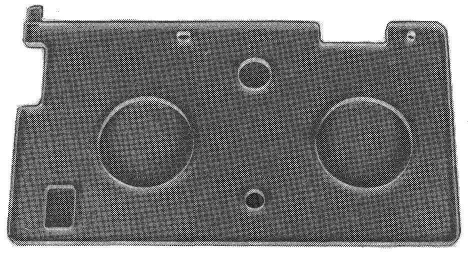
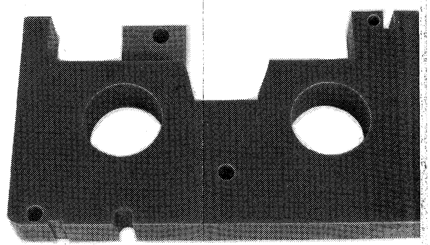
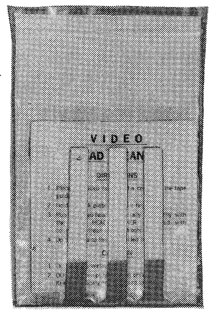
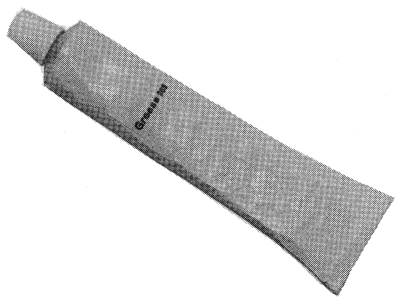


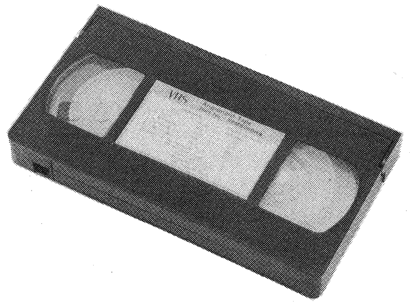
Fig.50.

Servicing Fixtures &

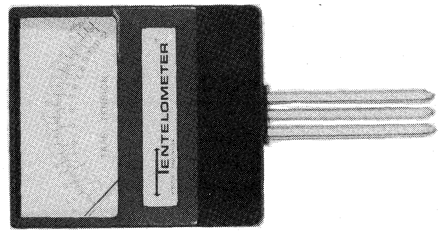
VFM8100H3D VHS Alignment Tape 	**Back Tension Meter (Tentelometer, Made in U.S.A.)** 	**VFK0133** Dial Torque Gaug **VFK0134** Adaptor for VFK(
VFK0137 Post Adjustment Screwdriver 	**VFK0191** Post Adjustment Plate 	**VFK0144** Retaining Ring Remover (3 **VFK0145** Retaining Ring Remover (4 
VFK0185 Cleaning Cassette Tape 	**VFK0187** Tension Post Adj. Fixture 	**VFK0188** Cassette Holder Fix 
VFK27 Head Cleaning Stick 	**MOR265** Morlytone Grease 	

Servicing Fixtures & Tools

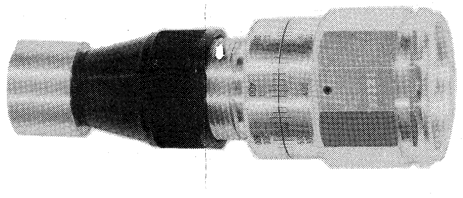
VFM8100H3D VHS Alignment Tape



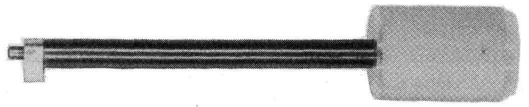
Back Tension Meter
(Tentelometer, Made in U.S.A.)


TENTELOMETER

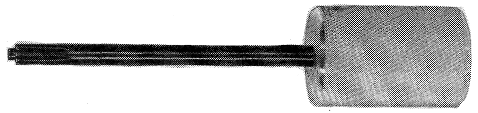
VFK0133 Dial Torque Gauge
VFK0134 Adaptor for VFK0133



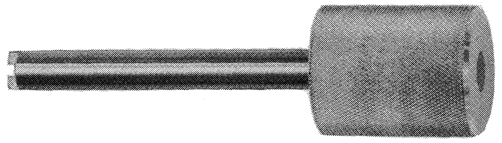
VFK0135 Eccentric Screwdriver



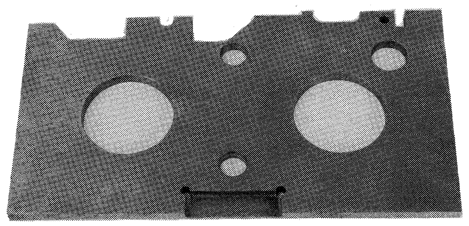
VFK0136 Fine Adjustment Screwdriver



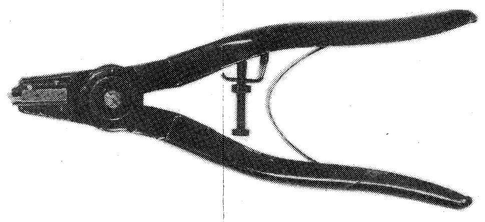
VFK0137 Post Adjustment Screwdriver



VFK0191 Post Adjustment Plate

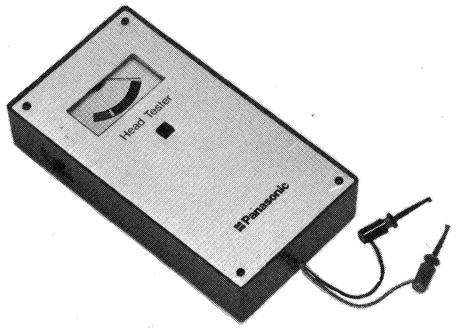


VFK0144 Retaining Ring Remover (3mm)
VFK0145 Retaining Ring Remover (4mm)



VFK0146 Hex. Wrench (0.9mm)
VFK75 Hex. Wrench (1.25mm)
VFK76 Hex. Wrench (1.5mm)

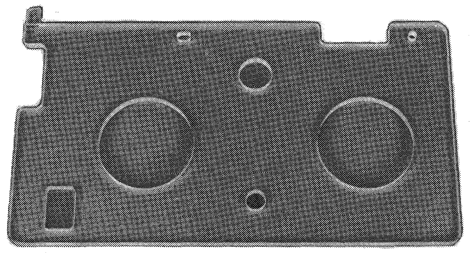
VFK0184 Head Tester


Head Tester
Panasonic

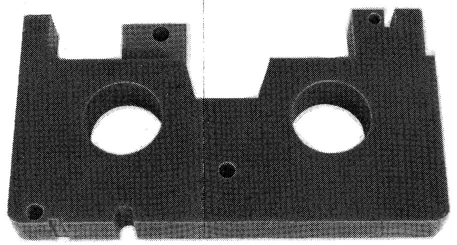
VFK0185 Cleaning Cassette Tape

Panasonic
VHS
Cleaning Cassette Tape

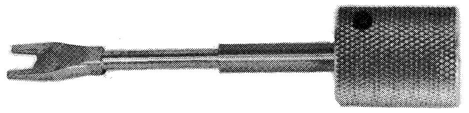
VFK0187 Tension Post Adj. Fixture



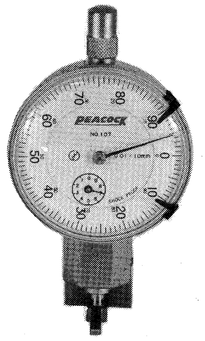
VFK0188 Cassette Holder Fixture



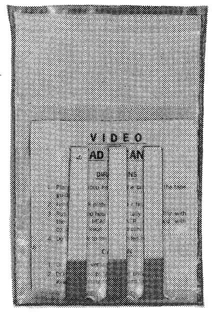
VFK0189 H-Portion Adj. Fixture



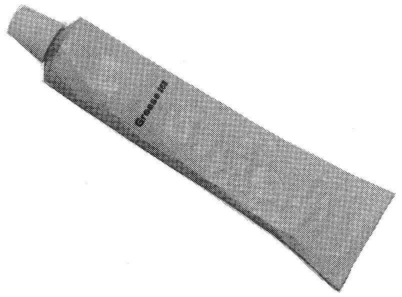
VFK0190 Reel Table Height Fixture



VFK27 Head Cleaning Stick



MOR265 Morlytone Grease



ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete electrical adjustment procedures which may be required for electronic circuits of PAL VHS video cassette recorder.

Test Equipment

To make adjustments completely,following equipment is required.

1. V.T.V.M.(Vacuum Tube Volt Meter)
   Voltage range: 0.001-50V
2. Dual-trace Oscilloscpe
   Voltage Range: 0.005-50V/div.
   Frequency Range:DC-10MHz
   Probes: 10:1 and 1:1
3. Frequency Counter
   Frequency Range:0-10MHz
4. Signal Generator
   Sinwave: 0-10MHz
5. Sweep Generator
   Frequency Range:0-10MHz
6. Colour Receiver or Monitor TV
7. Plastic Tip Driver

Adjustment Procedures

1. Power Supply Section

1-1. +12V Adjustment
Test Point: TP1501
Adjustment: R1007

1. Connect the VTVM to TP1501 on the Power Supply printed circuit board (VEP0177A).
2. Place the unit in Stop mode.
3. Adjust R1007 for +12 ± 0.15V.

2. Still Section

2-1. Pulse Width Adjustment of Frame Advance
Test Point: TP6702, Pin (4) of connector P6702
Adjustment: R6715

1. Connect the oscilloscope CH1 to Pin (4) of connector P6702 and CH2 to TP6702 on the Still printed circuit board (VEP00562A) and set it to CHOP mode.
2. Place the unit in Still mode.
3. Adjust R6715 so that the pulse width "A" becomes 8 ± 0.5 msec as shown in Fig. 1.

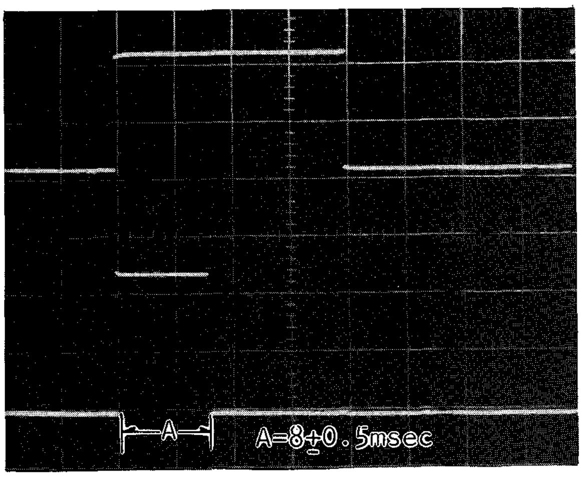


Fig. 1

2-2. Phase Adjustment of Noise Detection Pulse
Test Point: Cathode side of D6701, Pin (4) of connector P6702
Adjustment: R6716

1. Connect the oscilloscope CH1 to Pin (4) of connector P6702 and CH2 to the cathode side of D6701 on the Still printed circuit board (VEP00562A) and set it to CHOP mode.
2. Place the unit in Still mode.
3. Adjust R6716 so that the phase difference "B" becomes 250 ± 10 μsec as shown in Fig. 2.

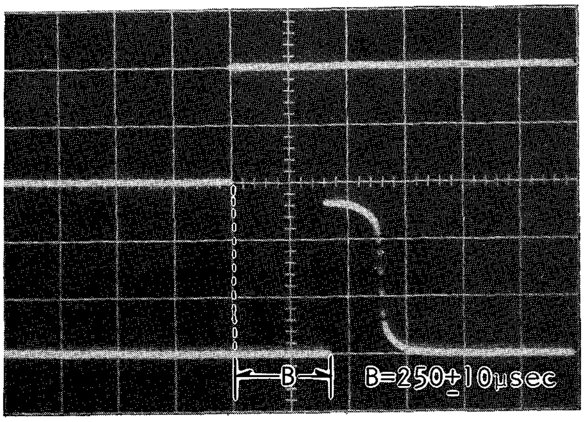


Fig. 2

2-3. Frame Advance Pulse Width Adjustment

Test Point: TP6703, Pin (4) of
connector P6702

Adjustment: R6718

1. Connect the oscilloscope CH1 to Pin (4) of connector P6702 and CH2 to TP6703 on the Still printed circuit board (VEP00562A) and set it to CHOP mode.
2. Place the unit from Play mode to Frame Advance mode.
3. Adjust R6718 so that the pulse width "A" becomes 15 ± 0.5 msec as shown in Fig. 3.

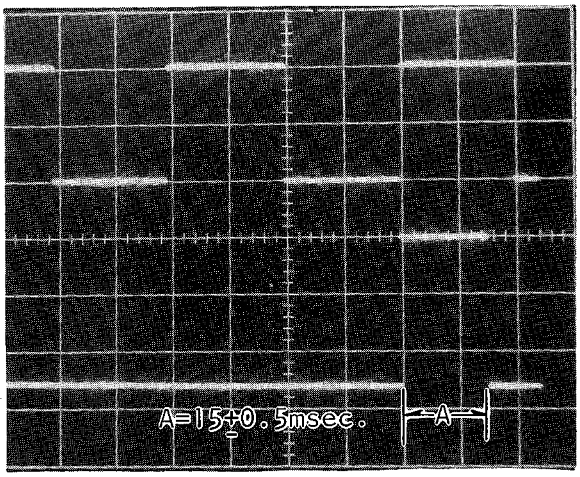


Fig. 3

2-4. Phase Adjustment of Additional Vertical Sync Pulse

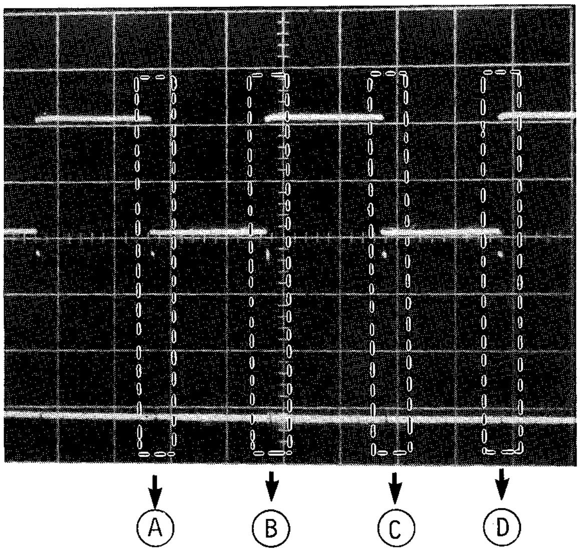
Test Point: TP6704, Pin (4) of
connector P6702

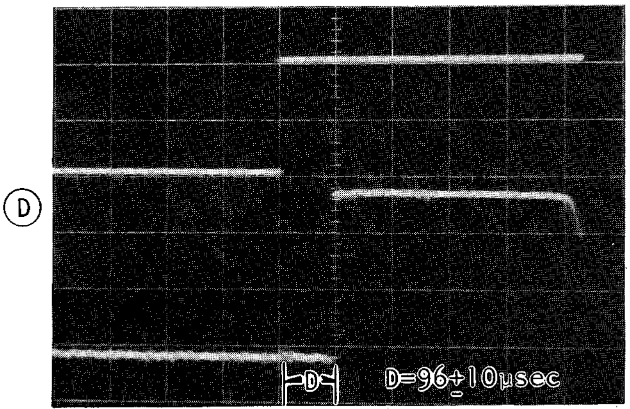
Adjustments: R6744...A' , R6745...C
R6746...A , R6747...B
R6748...D

1. Connect the oscilloscope CH1 to Pin (4) of connector P6702 and CH2 to TP6704 and set it to CHOP mode.
2. Place the unit in 1/2 Slow mode.
3. Adjust R6745, R6746, R6747 and R6748 so that each phase differences become following values.

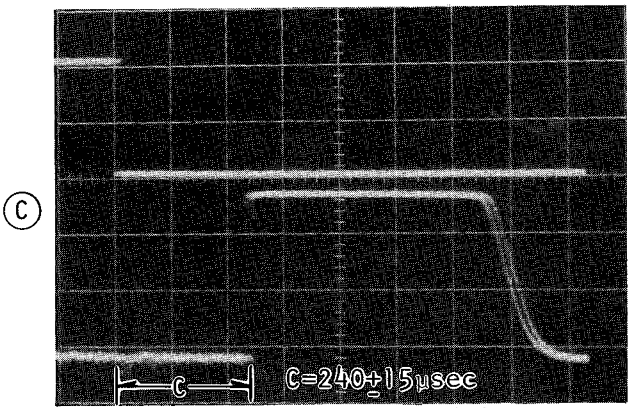
D ..... 144 ± 15 μsec
C ..... 192 ± 20 μsec
B ..... 240 ± 25 μsec
A ..... 96 ± 10 μsec

Each phase differences are shown in Fig. 4.

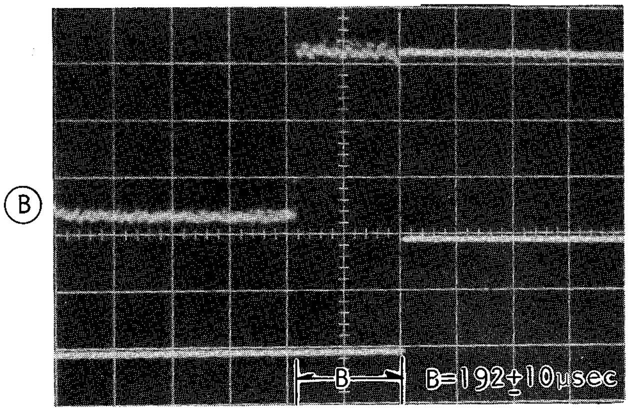




R6746



R6747



R6745

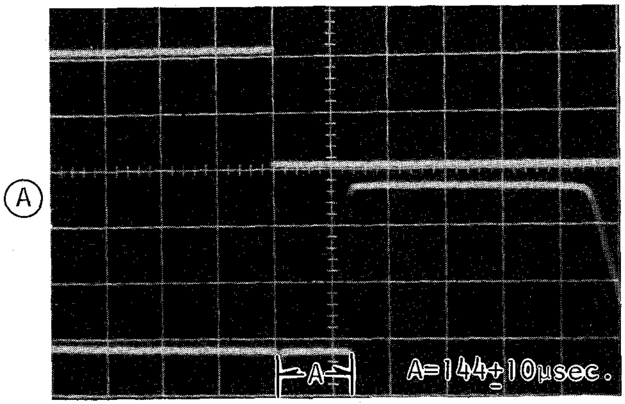
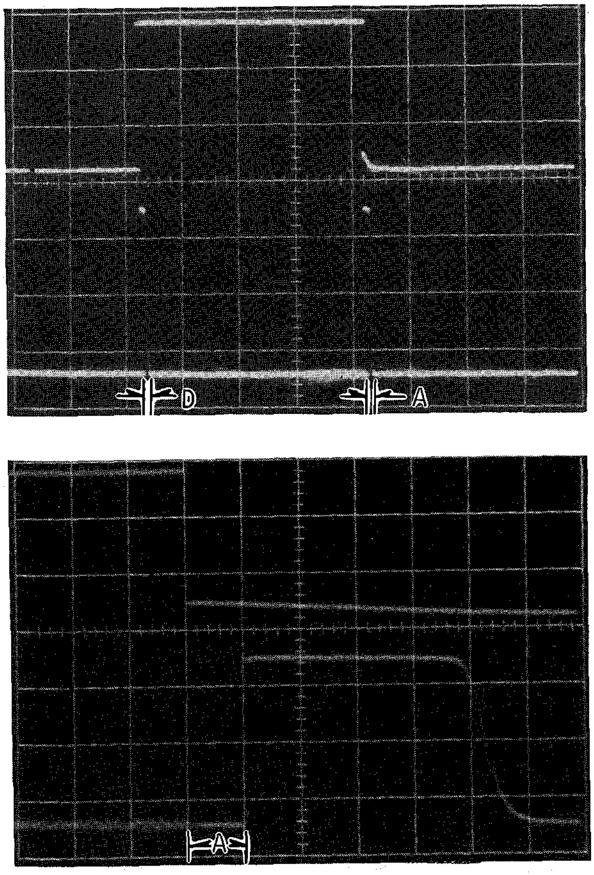


Fig. 4 R6748

4. Place the unit in Cue & Rev. mode.
5. Adjust R6744 so that phase differences (A' and D) becomes 144±15 µsec. as shown in Fig. 5.



A=144 ± 15 µsec
B=144 ± 15 µsec

Fig. 5

6. Place the unit in Still or Double Speed mode.
7. Adjust R6744 [A] and R6747 [B] so that phase differences are following values.

A'.....144 ± 15 µsec
B .....240 ± 15 µsec

These phase differences are shown in Fig. 6.

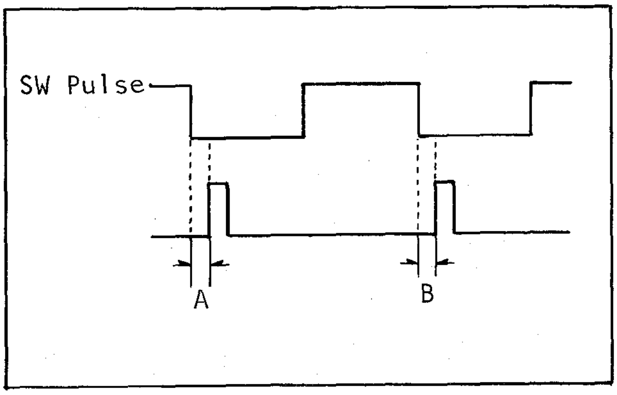


Fig. 6

2-5. Additional Vertical Sync Pulse Width Adjustment

Test Point: TP6704, Pin (4) of connector P6702
Adjustment: R6735

1. Connect the oscilloscope CH1 to Pin (4) of connector P6702 and CH2 to TP6704 on the Still printed circuit board (VEP00562A) and set it to CHOP mode.
2. Place the unit in 1/2 Slow mode.
3. Make sure that the variable range of pulse width "A" become 120 ∿ 420 µsec by turning R6735.
4. Adjust R6735 so that the pulse width "A" becomes 420 ± 20 µsec as shown in Fig. 7.

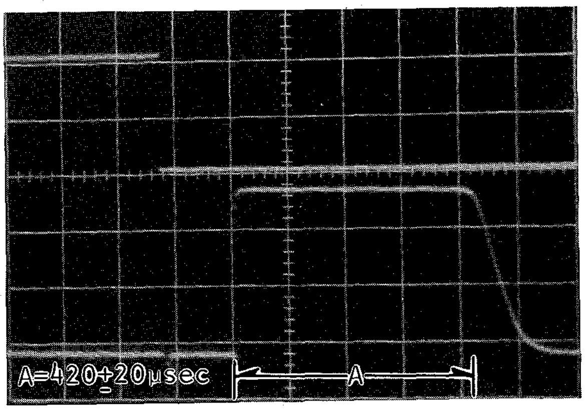


Fig. 7

3. Servo Control Section

3-1. Buffer Oscillator Frequency Adjustment

Test Point: TP2001
Adjustment: R2016

1. Do not supply any video signal to the Video Input.
2. Connect the oscilloscope to TP2001 on the Servo Control printed circuit board (VEP02104A).
3. Place the unit in Rec Play mode.
4. Adjust R2016 so that the "T" portion becomes $40\pm^{1}_{0}$ msec as shown in Fig. 10.
5. Supply a video signal to the Video Input.
6. Place the unit in Rec Play mode.
7. Make sure that the "T" portion becomes 40 msec.

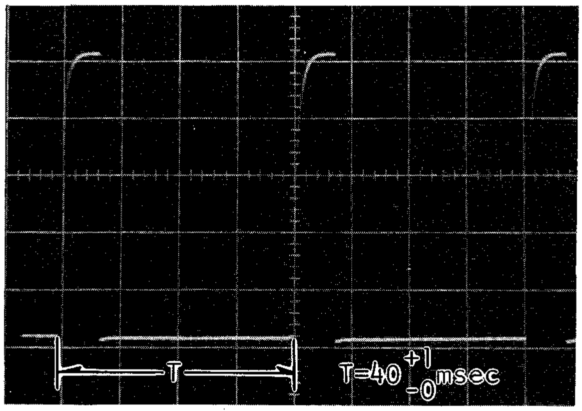


Fig. 8

3-2. Monostable Multivibrator Adjustment of Control Pulse

Test Point: TP2005
Adjustment: R2024

1. Supply a video signal to the Video Input or tune in a local on-air TV programme.
2. Connect the oscilloscope to TP2005 on the Servo Control printed circuit board (VEP02104A).
3. Place the unit in Rec Play mode.
4. Adjust R2024 so that the waveform of TP2005 becomes as shown in Fig. 9.

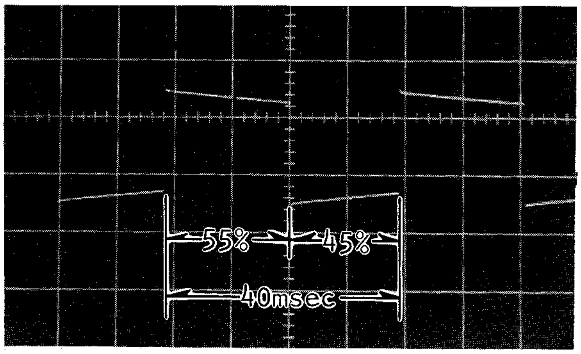


Fig. 9

3-3. Cylinder Free Running Adjustment

Test Point: TP2002, TP2003, TP2004
Adjustment: R2094

1. Supply a video signal to the Video Input or tune in a local on-air TV programme.
2. Place the unit in Rec Play mode.
3. Connect the oscilloscope CH1 to TP2002 and CH2 to TP2003 on the Servo Control printed circuit board (VEP02104A) and set it to ADD mode.
4. Pre-Adjust R2094 so that both waveforms, horizontal switching pulse and trapezoidal waveform, are phase-locked.
5. Connect the VTVM to TP2004.
6. Adjust R2094 so that the voltage of TP2004 becomes 5.4 ± 0.1 V. And make sure that above both waveforms are phase-locked.

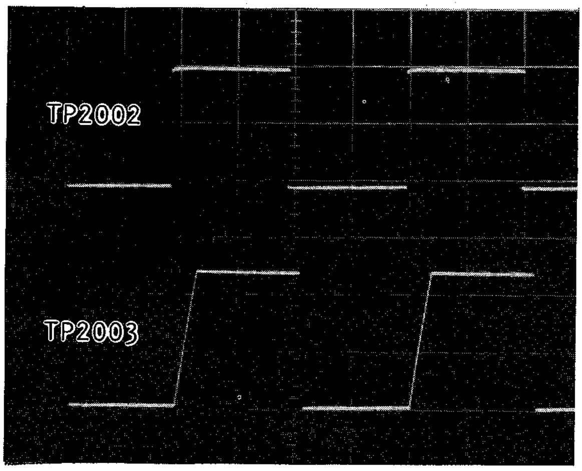


Fig. 10

3-4. Capstan Free Running Adjustment

Test Point: TP2009, TP2010, TP2011
Adjustment: R2197

1. Supply a video signal to the Video Input or tune in a local on-air TV programme.
2. Place the unit in Rec Play mode.
3. Connect the oscilloscope CH1 to TP2009 and CH2 to TP2010 on the Servo Control printed circuit board (VEP02104A) and set it to ADD mode.
4. Pre-adjust R2197 so that both waveforms, trapezoidal waveform and sampling hold pulse, are phase-locked.
5. Connect the VTVM to TP2011.
6. Adjust R2197 so that the voltage of TP2004 becomes 5.2 ± 0.2 V. And make sure that above both waveforms are phase-locked.
7. Further, place the unit in X2 (Double Speed) mode, and make sure that above both waveforms are phase-locked.

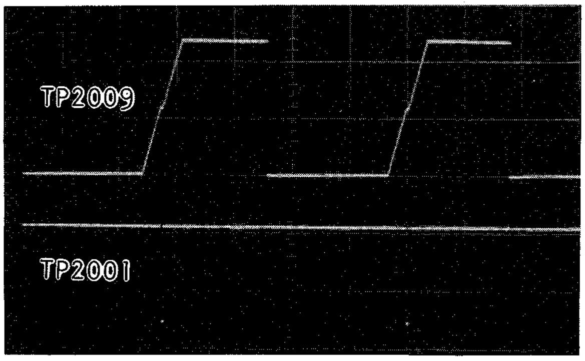


Fig. 11

3-5. PG Shifter Adjustment

Test Point: TP2002, TP3016
Adjustments: R2029, R2030

1. Connect the jumper wire between TP3005 and TP3007.
2. Connect the oscilloscope CH1 to TP2002 on the Servo Control printed circuit board (VEP02104A) and CH2 to TP3016 on the Video Colour printed circuit board (VEP0392A).
3. Play back the monoscope pattern of recorded reference tape and set the oscilloscope to CHOP mode. Then expand the switching position of the envelope.
4. Adjust R2029 and R2030 on the Servo Control printed circuit board (VEP02104A) to the rising and the falling edge of the switching pulse in the center of the overlapped of RF envelope.
5. Make sure that the difference between the rising pulse and the falling pulse becomes 10 μsec or less.
6. Remove the jumper wire.

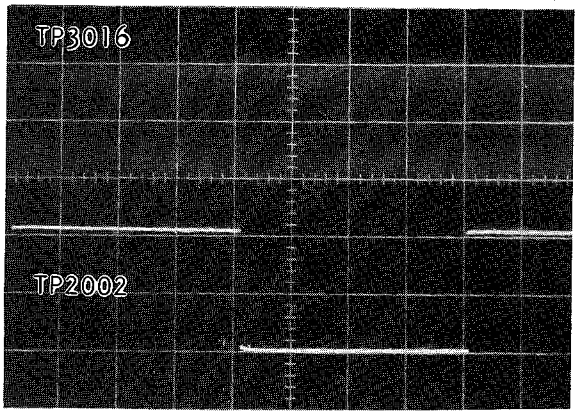


Fig. 12

3-6. REC Shifter Adjustment

Test Point: TP2002, TP3014
Adjustment: R2032

1. Supply a video signal to the Video Input or tune in a local on-air TV programme.
2. Connect the oscilloscope CH1 to TP2002 on the Servo Control printed circuit board (VEP02104A) and CH2 to TP3014 on the Video Colour printed circuit board (VEP0392A).
3. Place the unit in Rec Play mode.
4. Set the oscilloscope to the Delay mode, and expand the vertical interval section.
5. Adjust R2032 so that the recording head switching point is 6 ± 1 H before the start of vertical sync as shown in Fig. 13.

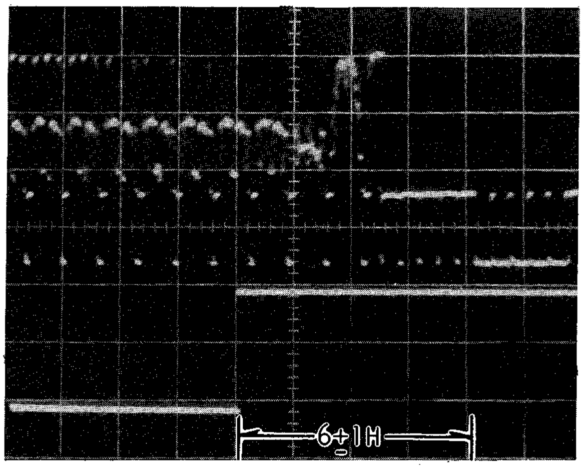


Fig. 13

3-7. Cylinder Free-Running Adjustment (Cue)

Test Point: TP2006
Adjustment: R2088

1. Connect the frequency counter to TP2006 on the Servo Control printed circuit board (VEP02104A).
2. Play back the video cassette tape, and place the unit in Cue mode.
3. Adjust R2088 so that the indication of frequency counter becomes 208.2 ± 0.3 Hz.

3-8. Cylinder Free-Running Adjustment (Review)

Test Point: TP2006
Adjustment: R2091

1. Connect the frequency counter to TP2006 on the Servo Control printed circuit board (VEP02104A).
2. Play back the recorded video tape, and place the unit in Review mode.
3. Adjust R2091 so that the indication of frequency counter becomes 190.8 ± 0.3 Hz.

3-9. Capstan Free-Running Adjustment (Cue)

Test Point: TP2009, TP2010, TP2011
Adjustment: R2195

1. Connect the oscilloscope CH1 to TP2009 and CH2 to TP2010 on the Servo Control printed circuit board (VEP02104A) and set it to ADD mode. At the same time, connect the frequency counter to TP2011.
2. Play back the recorded video tape, and place the unit in Cue mode.
3. Adjust R2195 so that both waveforms, trapezoidal waveform and sampling hold pulse, are phase-locked and the voltage of TP2011 becomes 5.0 ± 0.1 V.

3-10. Capstan Free-Running Adjustment (Review)

Test Point: TP2009, TP2010, TP2011
Adjustment: R2200

1. Connect the oscilloscope CH1 to TP2009 and CH2 to TP 2010 on the Servo Control printed circuit board (VEP02104A) and set it to ADD mode. At the same time, connect the frequency counter to TP2011.
2. Play back the recorded video tape, and place the unit in Review mode.
3. Adjust R2200 so that both waveforms, trapezoidal waveform and sampling hold pulse, are phase-locked and the voltage of TP2011 becomes 5.0 ± 0.1 V.

3-11. Capstan Free-Running Adjustment (X1/2)

Test Point: TP2009, TP2010, TP2011
Adjustment: R2198

1. Connect the oscilloscope CH1 to TP2009 and CH2 To TP2010 on the Servo Control printed circuit board (VEP02104A) and set it to ADD mode. At the same time, connect the frequency counter to TP2011.
2. Play back the recorded video tape and place the unit in 1/2 slow mode.
3. Adjust R2198 so that both waveforms, trapezoidal waveform and sampling hold pulse, are phase-locked and the voltage of TP2011 becomes 5.0 ± 0.1 V.

3-12. Tracking Monostable Multivibrator Adjustment (Normal and Double Speed modes)

Test Point: TP2002, TP2008
Adjustment: R2127

1. Connect the oscilloscope CH1 to TP2002 and CH2 to TP2008 on the Servo Control printed circuit board (VEP02104A) and set it to CHOP mode. Then, expand the rising portion of these waveforms.
2. Set the Tracking Control to the click point.
3. Play back the recorded video tape.
4. Adjust R2127 so that the "T" portion of these waveforms becomes 0.4 ± 0.4 msec as shown in Fig. 14.

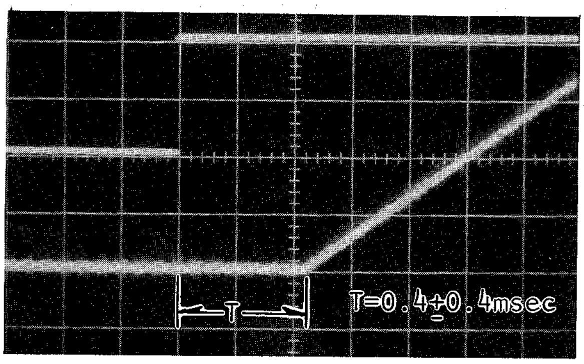


Fig. 14

5. Next, place the unit in Double Speed mode.
6. Make sure that the "T" portion of these waveforms becomes 2.5 ± 1 msec as shown in Fig. 15.

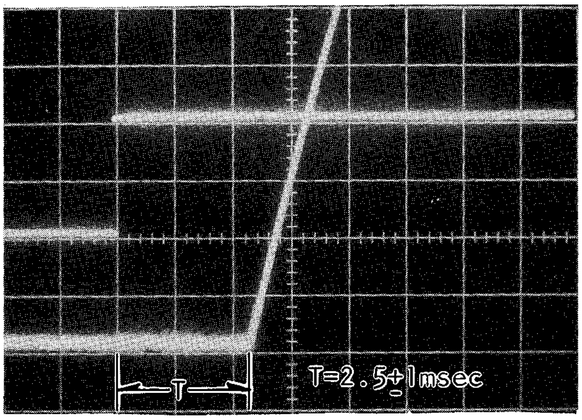


Fig. 15

3-13. Tracking Monostable Multivibrator Adjustment (1/2 Slow mode)

Test Point: TP2002, TP2b08
Adjustment: R2125

1. Connect the oscilloscope CH1 to TP2002 and CH2 to TP2008 on the Servo Control printed circuit board (VEP02104A) and set it to CHOP mode. Then, expand the rising portion of there waveforms.
2. Set the Tracking Control to the click point.
3. Play back the recorded video tape and place the unit in 1/2 Slow mode.
4. Set the tracking control to optimum point by watching on TV screen.
5. Make sure that the "T" portion of both waveforms becomes 1 ∿ 10 msec as shown in Fig. 16.

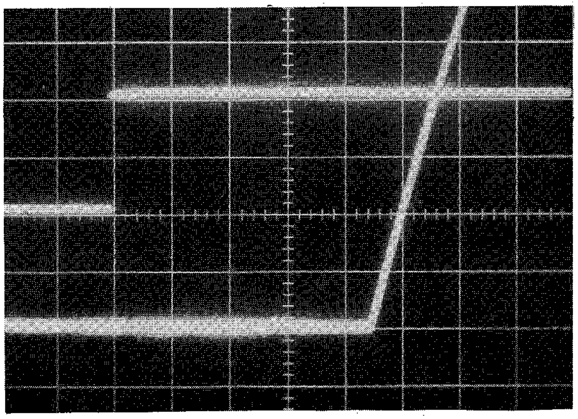


Fig. 16

3-14. Tape Speed Measurement

Test Point: TP2012

1. Connect the frequency counter to TP2012 on the Servo Control printed circuit board (VEP02104A).
2. Play back the recorded reference test tape.
3. When the indication of frequency counter becomes 505.36 Hz or more, Cut the jumper (- side) of pin (10) of IC8002 on the Video Colour printed circuit board (VEP0392A).
4. When the indication of frequency counter becomes 503.16 Hz or less, Cut the jumper (+ side) of pin (9) of IC8002.
5. When you cut the jumper, make sure that the indication of frequency counter becomes 504.26 ± 2.52 Hz.

4. Video & Colour Section

4-1. AFC Adjustment

Test Point: TP8009
Adjustment: R8058

1. Insert a video cassette tape to the unit and push the Rec button.
2. Don't supply any video signal to the Video Input.
3. Connect the frequency counter to TP8009 on the Video Colour printed circuit board (VEP0392A).
4. Adjust R8058 so that the indication of frequency counter becomes 15.625 kHz ± 50 Hz.
5. Supply a colour bar signal to the Video Input.
6. Make sure that the indication of frequency counter becomes 15.625 kHz ± 5 Hz.

4-2. APC Adjustment

Test Point: TP8008
Adjustment: C8050

1. Insert a video cassette tape to the unit and push the Rec button.
2. Don't supply any video signal to the Video Input.
3. Connect the frequency counter to TP8008 by using 10:1 probe on the Video Colour printed circuit board (VEP0392A).
4. Adjust C8050 so that the indication of frequency counter becomes 4.435572 MHz ± 50 Hz.

4-3. Reference Oscillation Frequency Adjustment

Test Point: TP8002
Adjustment: C8024

1. Place the unit in Stop mode.
2. Connect the frequency counter to TP8002 on the Video Colour printed circuit board (VEP0392A).
3. Don't supply any video signal to the Video Input.
4. Adjust C8024 so that the indication of frequency counter becomes 4.433619 MHz ± 10 Hz.

4-4. Rec Colour Killer Adjustment

Test Point: TP8003
Adjustment: R8077

1. Insert a video cassette tape to the unit and push the Rec button.
2. Supply a sweep signal set up following conditions to the Video Input.
   - A. Set the video level switch to OFF.
   - B. Set the Sync and Set Up level switches to ON.
   - C. Set the Burst level switch to ON.
   - D. Adjust each volumes so that the sync level becomes 0.3 Vp-p and the burst level becomes 30 mVp-p.
3. Connect the oscilloscope to TP8003 on the Video Colour printed circuit board (VEP0392A).
4. Adjust R8077 just to the point that the DC voltage changed Low (0.5 V or less) to High (8 V or more) on the oscilloscope.
5. Set the burst level switch of sweep generator to OFF.
6. Make sure that the DC voltage becomes Low (0.5 V or less) on the oscilloscope.

4-5. Head Amp Peak Frequency ADjustment

Test Point: TP3016
Adjustments: R3206, R3207, R3208,
C3037, C3038

1. Set the output of sweep generator to 100 mVp-p at no load, and after that set it to 31.6 mVp-p (-10 dB).
2. Supply the above signal to TP3005 and TP3007 the through 39 KΩ resistor as shown in Fig.   on the Video Colour printed circuit board (VEP0392A).

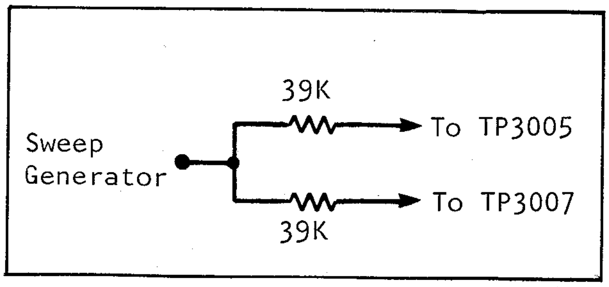


Fig. 17

3. Play back the video tape which is not recorded any video signal.
4. Connect the oscilloscope to TP3016.
5. Adjust R3206 and R3207 so that the level at 5 MHz becomes 5 times bigger than the level at 2 MHz as shown in Fig. 18-a

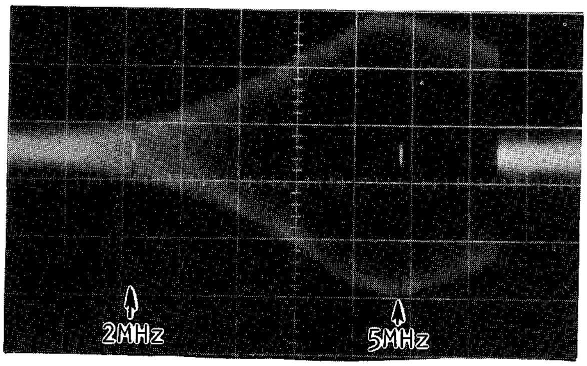


Fig. 18-a

6. Also adjust C3037 and C3038 so that peaks on the oscilloscope becomes 4.9 MHz ± 0.1 MHz as shown in Fig.18-b

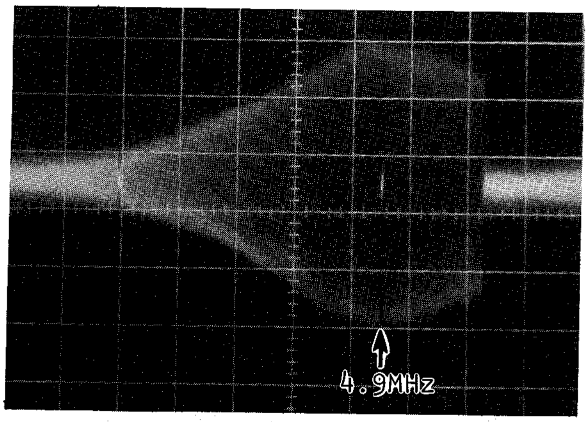


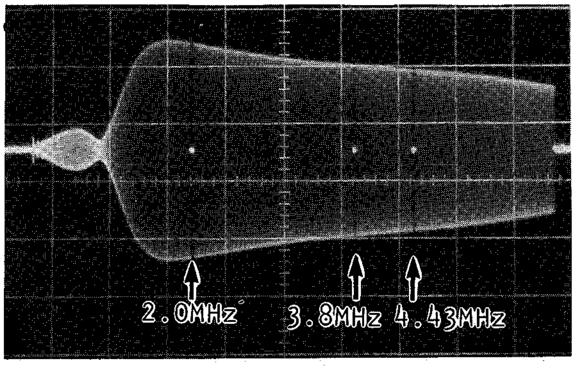
Fig.18-b

7. Adjust R3208 so that the CH1 waveform of 2 MHz portion is consistent with CH2 waveform of 2 MHz portion.

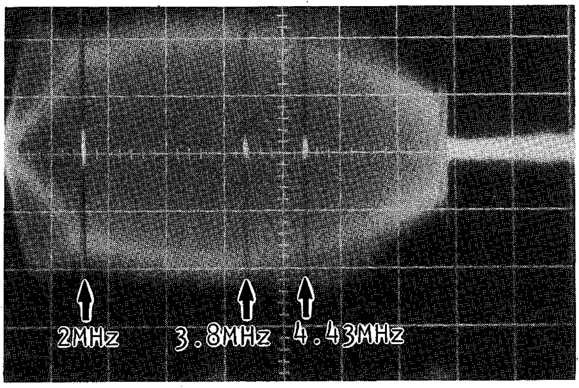
4-6. Head Amp Frequency Response Adjustment

Test Point: TP3016
Adjustments: R3206, R3207, R3208

1. Short-circuit between TP3003 and TP3004 by a jumper wire on the Video Colour printed circuit board (VEP0392A).
2. Supply the composite sync signal from Video Sweep Generator to Video Input on the front panel.
3. Supply the Sweep video signal to TP3009.
4. Connect the oscilloscope between TP3007(Hot) and TP3008(Ground)
5. Adjust the Sweep gain so that the 3.8MHz portion becomes 150mVp-p as shown in Fig. 19.



3.8MHz=150mVp-p
2.0MHz=160-200mVp-p
4.43MHz=130-155mVp-p



2MHz:3.8MHz=3:4

Fig. 19

4-7. E-E Level Adjustment

Test Point: TP3014
Adjustment: R3005

1. Insert a video cassette tape to the unit and push the Rec button.
2. Supply a colour bar signal to the Video Input.
3. Connect the oscilloscope to TP3014 on the Video Colour printed circuit board (VEP0392A).
4. Adjust R3005 so that the luminance level at TP3014 becomes 2.0 ± 0.1 Vp-p as shown in Fig. 20.

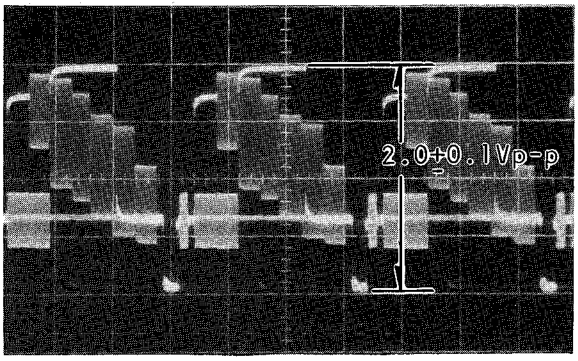


Fig. 20

4-8. Sync Tip, Deviation, Dark Clip, and White Clip Adjustment

Test Point: TP3002, TP3009
Adjustments: C3022, R3013, R3017, R3019

A. Sync Tip & Deviation

1. Do not supply any video signal to the Video Input.
2. Connect the frequency counter to TP3009 on the Video Colour printed circuit board (VEP0392A).
3. Insert a video cassette tape and place the unit in Rec. mode.
4. Adjust C3022 so that the indication of frequency counter becomes 3.8 ± 0.1 MHz.
5. Supply a colour bar signal to the Video Input.
6. Connect the oscilloscope to TP3002.
7. Place the unit in Rec. mode.

8. Adjust R3019 so that the output level at TP3002 which is from white level to sync tip level becomes 0.5 ± 0.1 Vp-p as shown in Fig. 21.

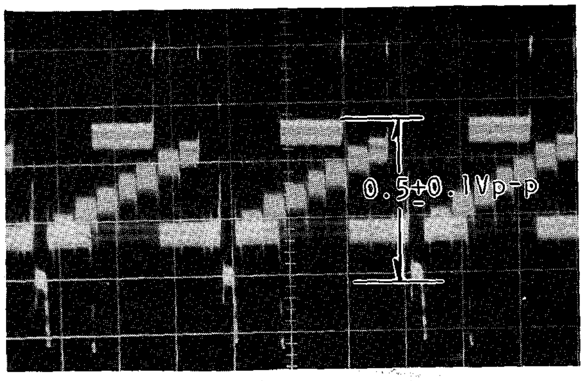


Fig. 21

B. Dark Clip

9. Adjust R3017 so that the dark clip level becomes as shown in Fig. 22.

C. White Clip

10. Adjust R3013 so that the white level becomes as shown in Fig.

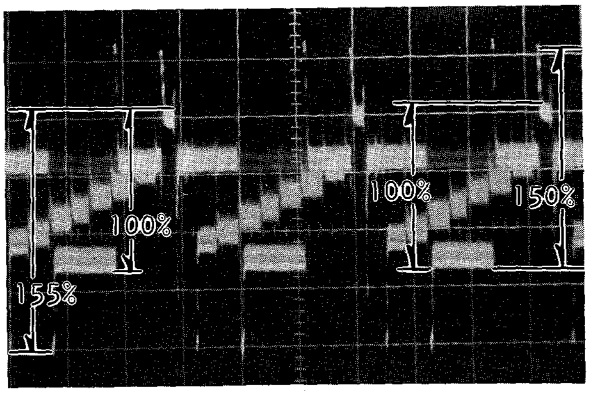


Fig. 22

4-9. Recording Current Adjustment
Test Point: TP3007, TP3008
Adjustments: R3025, R8030

1. Short-circuit between TP3003 and TP3004 by using jumper wire on the Video Colour printed circuit board (VEP0392A).
2. Supply a colour bar signal to the unit.
3. Connect the oscilloscope to TP3007 (HOT) and TP3008. (GROUND).
4. Place the unit in Rec Play mode.
5. Adjust R8030 so that the chroma recording current becomes 32 ± 2 mVp-p as shown in Fig. 23.

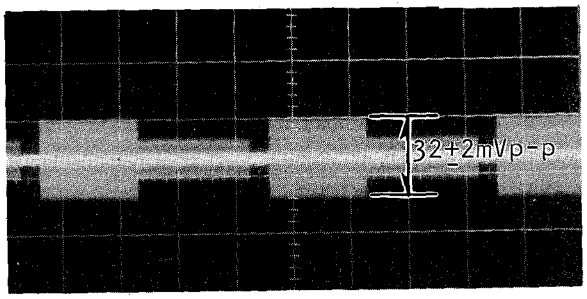


Fig. 23

6. Remove the jumper wire.
7. Adjust R3025 so that the amplitude of Vertical sync portion becomes 150 mVp-p as shown in Fig. 24.

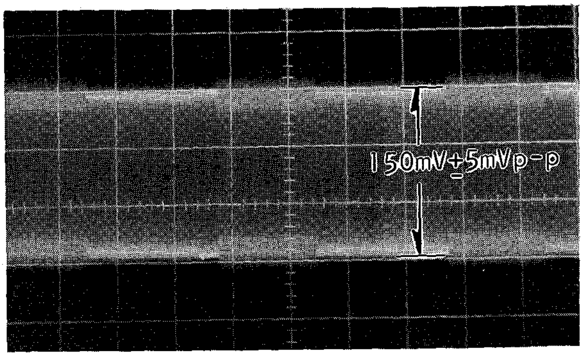


Fig. 24

4-10. Dropout Compensator Input Level Adjustment
Test Point: TP3015
Adjustment: R3111

1. Supply a colour bar signal to the Video Input.
2. Place the unit in Rec Play mode and make a recording.
3. Connect the oscilloscope to TP3015 on the Video Colour printed circuit board (VEP0392A).
4. Play back the portion just recorded.
5. Adjust R3111 so that the average of envelope waveform becomes 500 mVp-p.

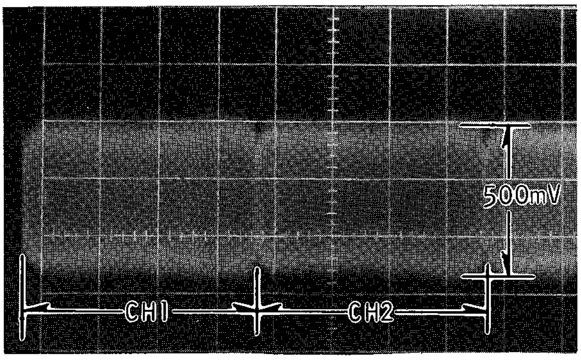


Fig. 25

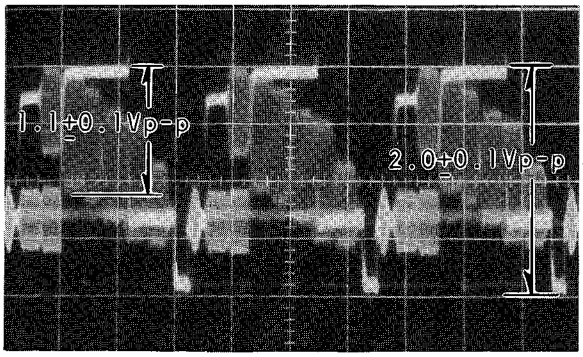


Fig. 26

4-11. Limiter & DL Balance Adjustments

Test Point: TP3013

Adjustments: R3071, R3129

1. Supply a video signal to the Video Input.
2. Place the unit in Rec. Play mode and make a recording.
3. Connect the oscilloscope to TP3013 on the Video Colour Printed circuit board (VEP0392A).
4. Short-circuit between TP3012 and ground by the jumper wire.
5. Play back the portion just recorded.
6. Expand the white level portion and adjust R3129 so that the 4.8 MHz portion becomes minimum.
7. Remove the jumper wire.
8. Expand the tip of sync signal portion and adjust R3071 so that the 3.8 MHz portion becomes minimum.

4-12. Playback Level Adjustment

Test Point: TP3014

Adjustment: R3136, R8007

1. Supply a colour bar signal to the Video Input.
2. Connect the oscilloscope to TP3014 on the Video Colour printed circuit board (VEP0392A).
3. Place the unit in Rec Play mode and make a recording.
4. Play back the portion just recorded.
5. Adjust R3136 so that the luminance level becomes 2.0 ± 0.1 Vp-p.
6. Adjust R8007 so that the cyan level becomes 1.1 ± 0.1 Vp-p.

4-13. Comb Filter Adjustment

Test Point: TP8001

Adjustment: R8021

1. Supply a colour bar signal to the Video Input.
2. Connect the oscilloscope to TP8005 on the Video Colour printed circuit board (VEP0392A).
3. Place the unit in Rec Play mode and make a recording.
4. Play back the portion just recorded.
5. Adjust R8021 so that A:B is 2:1 as shown in Fig. 27.

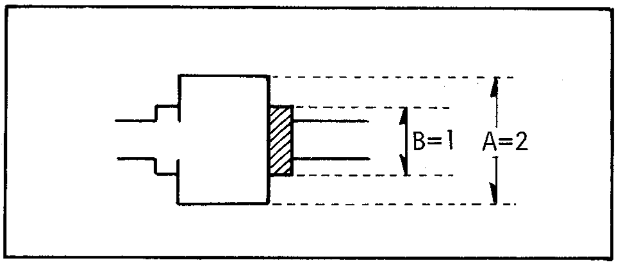


Fig. 27

4-14. Test Signal Frequency Adjustment

Test Signal: Terminal 2 of connector P3003

Adjustment: R3153

1. Do not supply any video signal to the Video Input.
2. Place the unit in Stop mode.
3. Set the Test Signal Switch to ON.
4. Connect the oscilloscope to the terminal 2 of connector P3003 on the Video Colour printed circuit board (VEP0392A).
5. Adjust R3153 so that the interval of horizontal sync signal becomes 64.0 ± 0.3 µsec.

5. Audio Section

5-1. Playback Gain Adjustment

Test Point: TP4001
Adjustment: R4021

1. Playback the recorded reference test tape (1 kHz signal portion).
2. Connect the oscilloscope to TP4001 on the Audio printed circuit board (VEP0458A).
3. Set the NR (Noise Reduction) switch to OFF.
4. Adjust R4021 so that the playback level becomes 400 mVp-p.

5-2. Bias Current Adjustment

Test Point: Both ends of R1501
Adjustment: C4058

1. Do not supply any audio signal to the Line in.
2. Insert a video cassette tape and place the unit in Rec Play mode.
3. Set the NR switch to OFF.
4. Connect the oscilloscope to both ends of R1501, 10Ω resistor.
5. Adjust C4058 so that the bias current becomes 3.6 ± 0.1 mVrms.
6. Place the unit in Audio Dub. mode.
7. Make sure that the bias current is $3.6 {}^{+0.4}_{-0.1}$ mVrms.

5-3. Full Erase Oscillation Confirmation

Test Point: Both ends of Full Erase Head

1. Connect the oscilloscope to both ends of full erase head.
2. Insert a video cassette tape and place the unit in Rec Play mode.
3. Set the NR switch to OFF.
4. Make sure that the oscillation waveform becomes 40 Vp-p or more without the distortion.
5. Place the unit in Audio Dub. mode.
6. Make sure that the oscillation waveform is 0 Vp-p.

5-4. E-E Level Confirmation

Test Point: TP4001

1. Supply a 1 kHz sine waveform signal (0.3 Vrms, -10 dBV) to the Line In.
2. Set the NR switch to OFF.
3. Insert a video cassette tape and place the unit in Rec Play mode.
4. Connect the oscilloscope to the Line Out.
5. Make sure that the Line out level becomes 0.5 ± 0.08 Vrms.

5-5. Confirmation of Noise Reduction Operation

Test Point: TP4002

1. Supply a SG signal to the Line in.
2. Connect the oscilloscope to TP4002 on the Audio printed circuit board (VEP0458A).
3. Insert a video cassette tape and place the unit in Rec Play mode.
4. Set the NR switch to OFF.
5. Adjust the SG signal output level (at 100 Hz) so that the output level at TP4002 becomes 20 mVrms.
6. Set the SG frequency to 5 kHz.
7. Make sure that the output level at TP4002 is 20 ± 5 mVrms.
8. Set the NR switch to ON.
9. Make sure that the output level at TP4002 is 45 ± 10 mVrms.

5-6. Bias Leak Confirmation

Test Point: TP4001

1. Do not supply any audio signal to the Line In.
2. Connect the oscilloscope to TP4001 on the Audio printed circuit board (VEP0458A).
3. Set the NR switch to OFF.
4. Insert a video cassette tape and place the unit in Rec Play mode.
5. Make sure that the bias leak at TP4001 becomes 50 mVp-p or less.

5-7. Recording Level Adjustment

Test Point: TP4001
Adjustment: R4043

1. Supply a 1 kHz sine waveform signal (0.3 Vrms, -10 dBV) to the Line In.
2. Connect the oscilloscope to TP4001 on the Audio printed circuit board (VEP0458A).
3. Insert a video cassette tape and place the unit in Rec Play mode and make a recording.
4. Play back the portion just recorded.
5. Adjust R4043 so that the playback level at TP4001 becomes 0.5 ± 0.05 Vrms.

TV Demodulator Section

MODEL: NV-7000E

This section provides complete electrical adjustment procedures which may be required for TV demodulator circuit.

Test Equipment

To make adjustments completely, following equipment is required.

1. VIF Sweep Generator	... 38.9MHz
2. SIF Sweep Generator	... 33.4MHz ± 150KHz
3. Oscilloscope	... More than 10MHz
4. Trap Adjuster	... 31.9MHz/33.4MHz/ 40.4MHz
5. Power Supply	... 5V/12V/30V/45V
6. Jumper Wire	

A. VIF Sweep Adjustment

Test equipment connection

1. Connect the P705 Jig to P705.
2. Supply the +15V from Power Supply to TP712.
3. Set the channel selector to the VHF High position.
4. Connect the P704 Jig to P704.
5. Connect the jumper wire between TP710 (RF AGC) on the Tuner and Ground.
6. Connect a resistor 100 between TP708 and TP709.
7. Connect the Bias Box to TP704.
8, Connect the From Rec Terminal on the VIF Sweep Generator to TP707.
9. Supply the output of the Sweep Generator to TP on the Tuner.
10. Confirm that 0V is supplied to BS terminal and +15V is supplied to BV terminal of tuner.
11. Remove the bias connector from TP704.

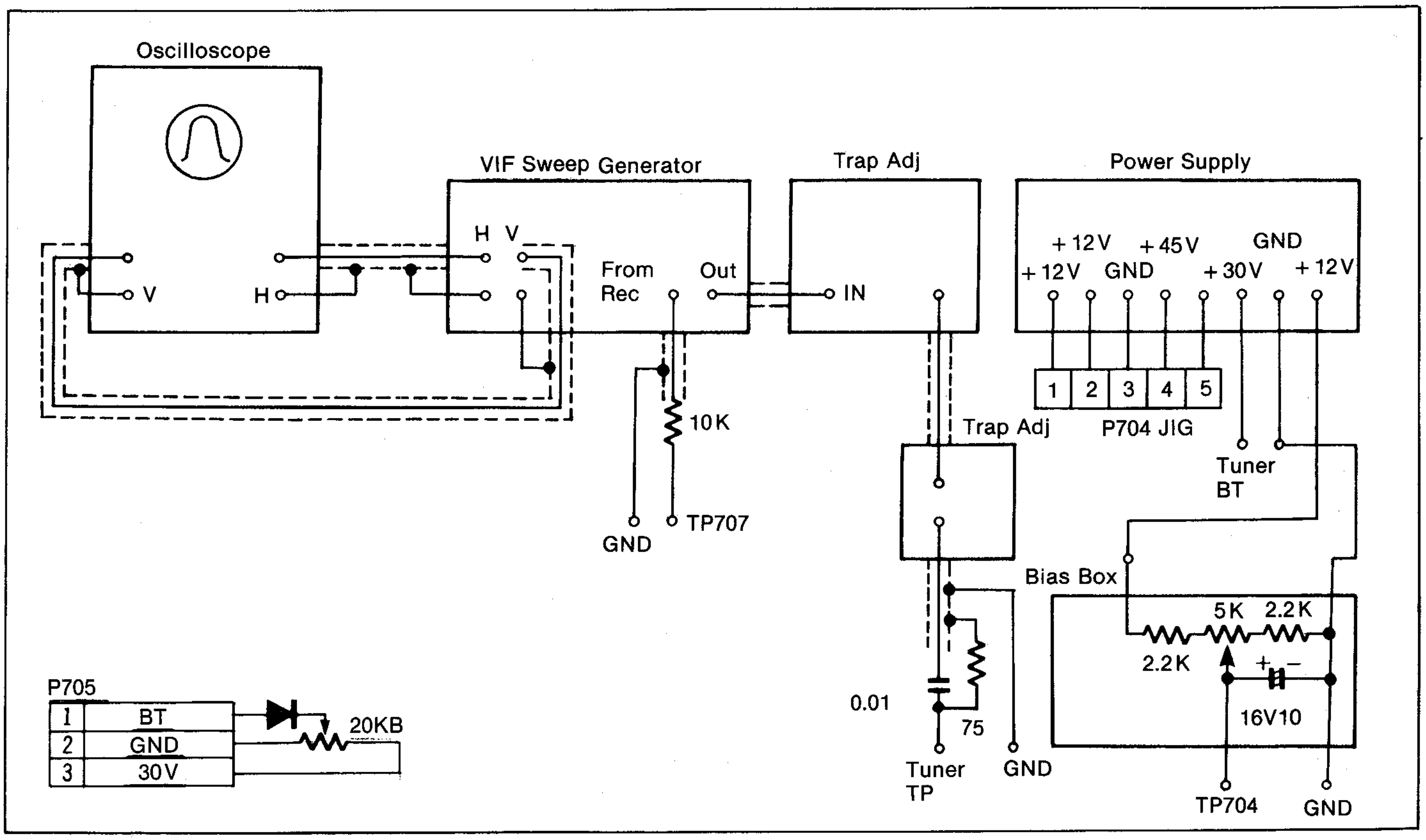
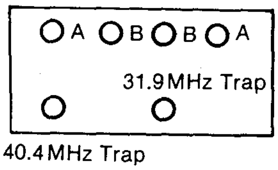

Oscilloscope
V
H
VIF Sweep Generator
H V
From Rec
Out
Trap Adj
IN
Power Supply
+12V
+45V
GND
+12V
GND
+30V
+12V
1
2
3
4
5
P704 JIG
Tuner BT
10K
GND
TP707
Trap Adj
Bias Box
5K
2.2K
2.2K
16V10
0.01
75
Tuner TP
GND
TP704
GND
P705
1 BT
2 GND
3 30V
20KB

Fig. 1 Test Equipment Connection

12. Adjust the output of VIF sweep generator so that the level of sweep output becomes 1.0Vp-p.
13. Release 20dB from the attenuator of sweep generator.
14. Adjust the IF AGC bias so that the sweep wave becomes 1.0Vp-p.
15. Adjust T702 so that the attenuation of 33.4MHz trap becomes maximum.
16. Adjust T701 (40.4MHz trap) so that the attenuation of 40.4MHz becomes maximum.
17. Adjust the tuner converter coil and T701 (A coil) so that the sweep output waveform becomes as shown in Fig. 3.



B Coil: B Coil adjustment is required, if VIF waveform can not meet as shown in Fig. 2.

Fig. 2 IF Filter T705

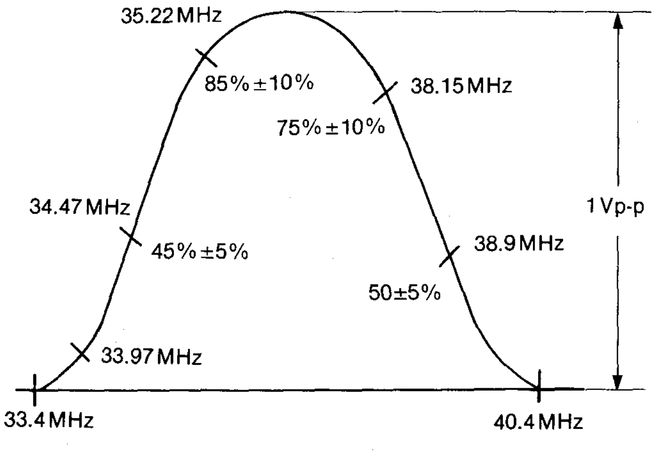


Fig. 3 VIF Waveform

B. 38.9MHz Tuning Coil Adjustment

1. Test equipment connection is same as VIF Sweep adjustment.
2. Connect the output of VIF sweep generator to TP703.
3. Adjust the sweep out so that the sweep wave becomes 0.1Vp-p as shown in Fig.4.
4. Adjust T704 so that the marker position of 38.9MHz becomes maximum as shown in Fig. 4.

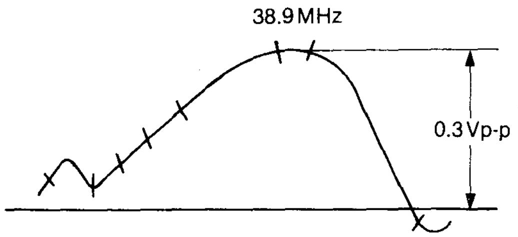


Fig. 4

5. After item 4 is completed, adjust T703 so that the marker position of 38.9MHz area becomes as shown in Fig.5.

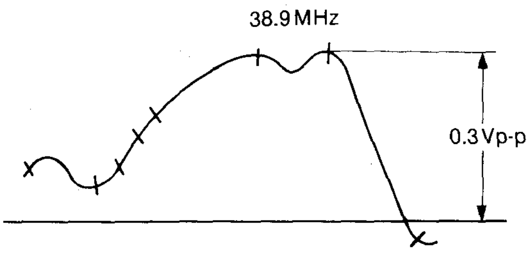


Fig. 5

C. SIF Sweep Adjustment

1. Connect the output of SIF sweep generator to TP706.
2. Connect the output of SIF sweep generator to TP706.
3. Connect the power supply to P704.

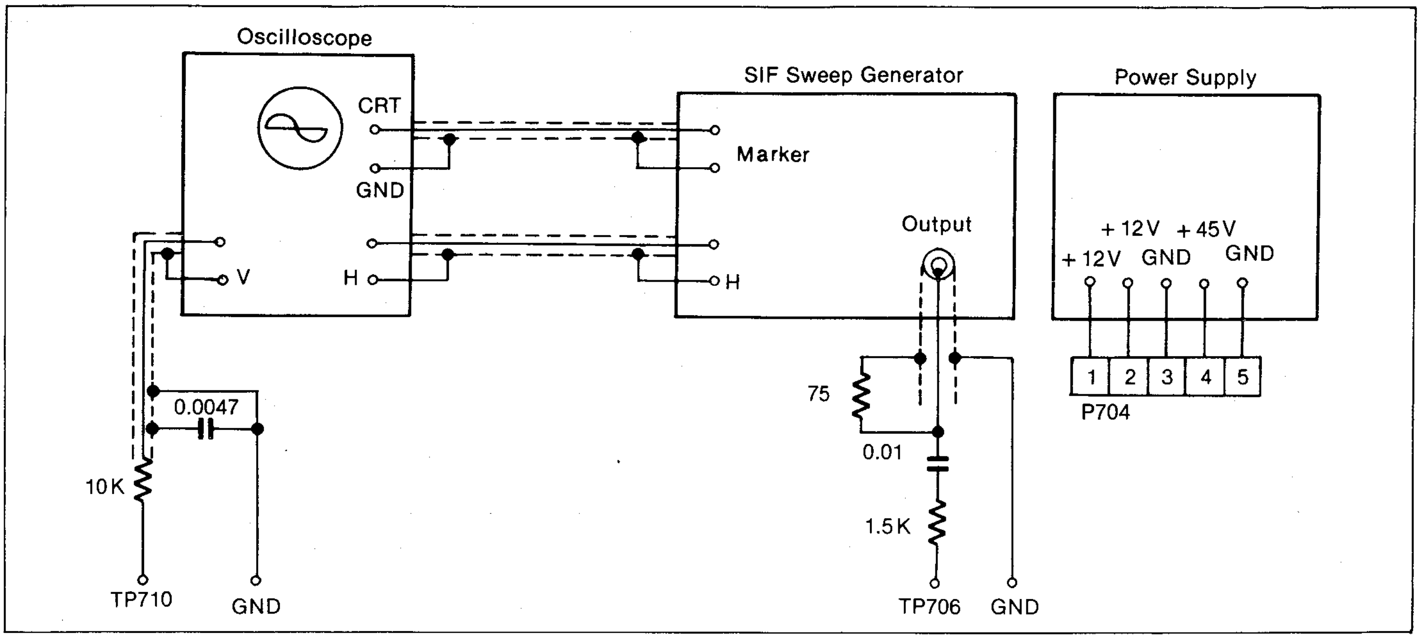

Oscilloscope
CRT
GND
V
H
SIF Sweep Generator
Marker
Output
H
Power Supply
+12V +45V
+12V GND GND
1
2
3
4
5
P704
0.0047
10K
TP710
GND
75
0.01
1.5K
TP706
GND

Fig. 6 Test Equipment Connection

4. Set the sweep output to 250Vr.m.s, 75Ω unbalanced.
5. Adjust T705 for maximum peak-to-peak amplitude of response "A" curve as shown in Fig. 7.
6. Confirm that the level between the 150KHz marker position is more than 2.0V.

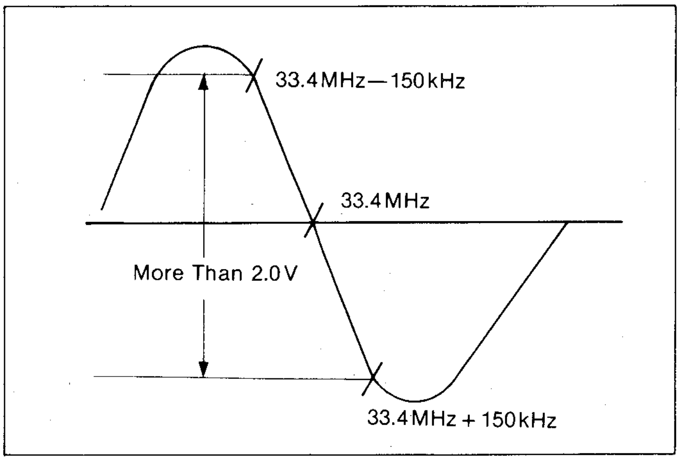

33.4MHz—150kHz
33.4MHz
More Than 2.0V
33.4MHz + 150kHz

Fig. 7 Response "A" Curve

D. AFC Adjustment

1. Connect CW Oscillator to Tuner TP and supply 38.9MHz CW signal.
2. Adjust the 38.9MHz CW signal for satulation level at TP702.
3. Connect the VTVM to Tuner AFC terminal.
4. Set the AFC switch "ON".
5. Adjust T703 so that the level at AFC terminal becomes 6.5 ± 0.3V.
6. Change the frequency of CW oscillator ± 100KHz, centerd at 38.9MHz and confirm that the change of AFC voltage is more than 2V.

E. Confirmation of Video level/Adjustment of burst level

1. Supply the PAL Standard Colour Bar signal to ANT.
2. Connect the resistor 75 to Video out.
3. Connect the oscilloscope to TP705.
4. Confirm that the video level at TP702 is 1.0 ± 0.2Vp-p as shown in Fig.8.
5. Adjust R718 so that the burst level becomes 200 ± 20mVp-p as shown in Fig. 8.

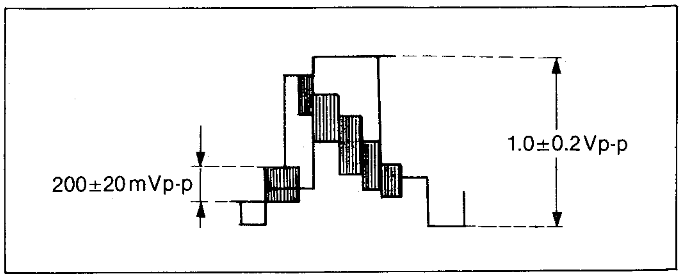

200±20mVp-p
1.0±0.2Vp-p

Fig. 8 Video and Burst Levels

TV Demodulator Section

MODEL: NV-7000B

This section provides complete electrical adjustment procedures which may be required for TV demodulator circuit.

Test Equipment

To make adjustments completely, following equipment is required.

1.	VIF Sweep Generator	... 39.5MHz
2.	SIF Sweep Generator	... 33.5MHz ± 150KHz
3.	Oscilloscope	... More than 10MHz
4.	Trap Adjuster	... 32.0MHz/33.5MHz/41.5MHz
5.	Power Supply	... 5V/12V/30V/45V
6.	Jumper Wire	

A. VIF Sweep Adjustment
Test equipment connection

1. Supply the +30V power supply to the tuner BT terminal.
2. Connect P7101 to the main P.C. board (VEP0739).
3. Connect the jumper wire between Pin 4, 5 and 6 of the connector P7104.
4. Connect the jumper wire between RF AGC terminal and ground of tuner (TNV87401EFR).
5. Connect a resistor 100Ω between TP708 and TP709.
6. Connect the bias connector to TP704.
7. Connect the from Rec terminal of VIF sweep generator to TP707.
8. Set the channel selector to the high TV channel. (UHF high: 68ch)
9. Connect the output of VIF sweep generator to tuner test point TP7102.

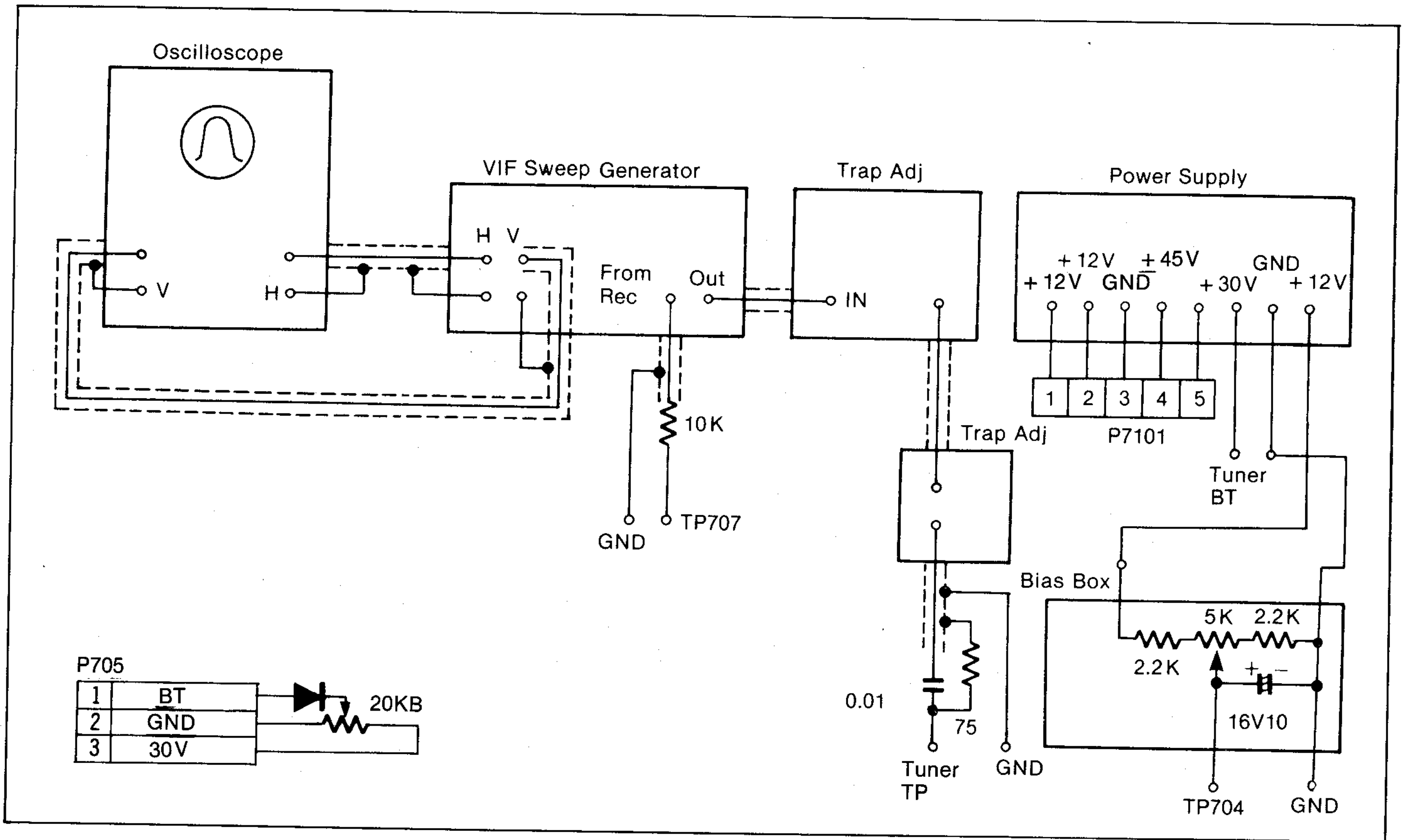
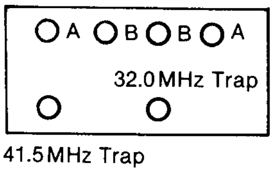

Oscilloscope
V
H
VIF Sweep Generator
H V
From Rec
Out
Trap Adj
IN
Power Supply
+12V +45V
+12V GND GND
+30V +12V
1 2 3 4 5
P7101
10K
GND
TP707
Trap Adj
Tuner BT
Bias Box
5K 2.2K
2.2K
+ −
16V10
0.01
75
Tuner TP
GND
TP704
GND
P705
1 BT
2 GND
3 30V
20KB

Fig. 1 Test Equipment Connection

10. Confirm that 0V is supplied to BS terminal and +15V is supplied to BV terminal of tuner.
11. Remove the bias connector from TP704.
12. Adjust the output of VIF sweep generator so that the level of sweep output becomes 1.0Vp-p.
13. Release 20dB from the attenuator of sweep generator.
14. Adjust the IF AGC bias so that the sweep wave becomes 1.0Vp-p.
15. Adjust T702 so that the attenuation of 33.5MHz trap becomes maximum.
16. Adjust T701 (41.5MHz trap) so that the attenuation of 41.5MHz becomes maximum.
17. Adjust the tuner converter coil and T701 (A coil) so that the sweep output waveform becomes as shown in Fig.3.



B Coil: B Coil adjustment is required, if VIF waveform can not meet as shown in Fig. 2.

Fig. 2 IF Filter T705

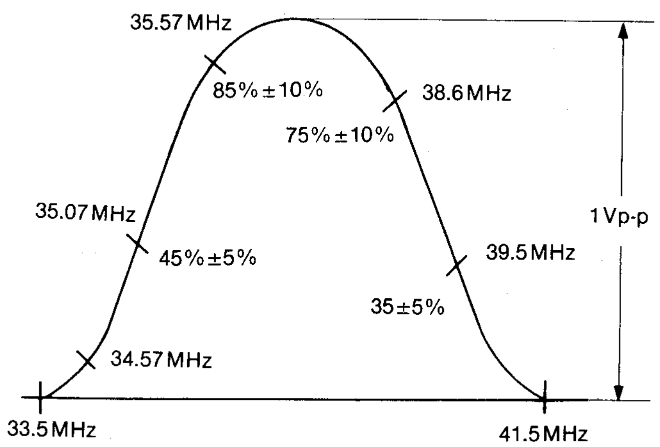


Fig. 3 VIF Waveform

B. 39.5MHz Tuning Coil Adjustment

1. Test equipment connection is same as VIF Sweep adjustment.
2. Connect the output of VIF sweep generator to TP703.
3. Adjust the sweep out so that the sweep wave becomes 0.1Vp-p as shown in Fig.4.
4. Adjust T704 so that the marker position of 39.5MHz becomes maxmum as shown in Fig.4.

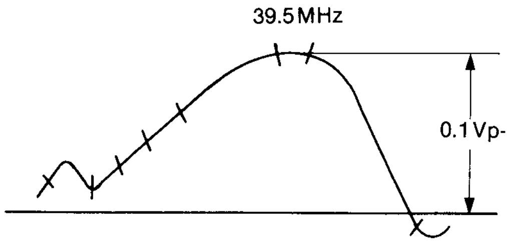


Fig. 4

5. After item 4 is completed, adjust T703 so that the marker position of 39.5MHz area becomes as shown in Fig.5.

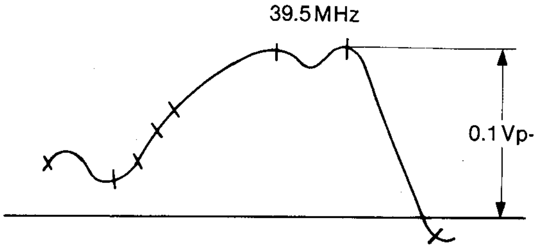


Fig. 5

C. SIF Sweep Adjustment

1. Connect the output of SIF sweep generator to TP706.
2. Connect the input of oscilloscope to TP701.
3. Connect the power supply to P704.

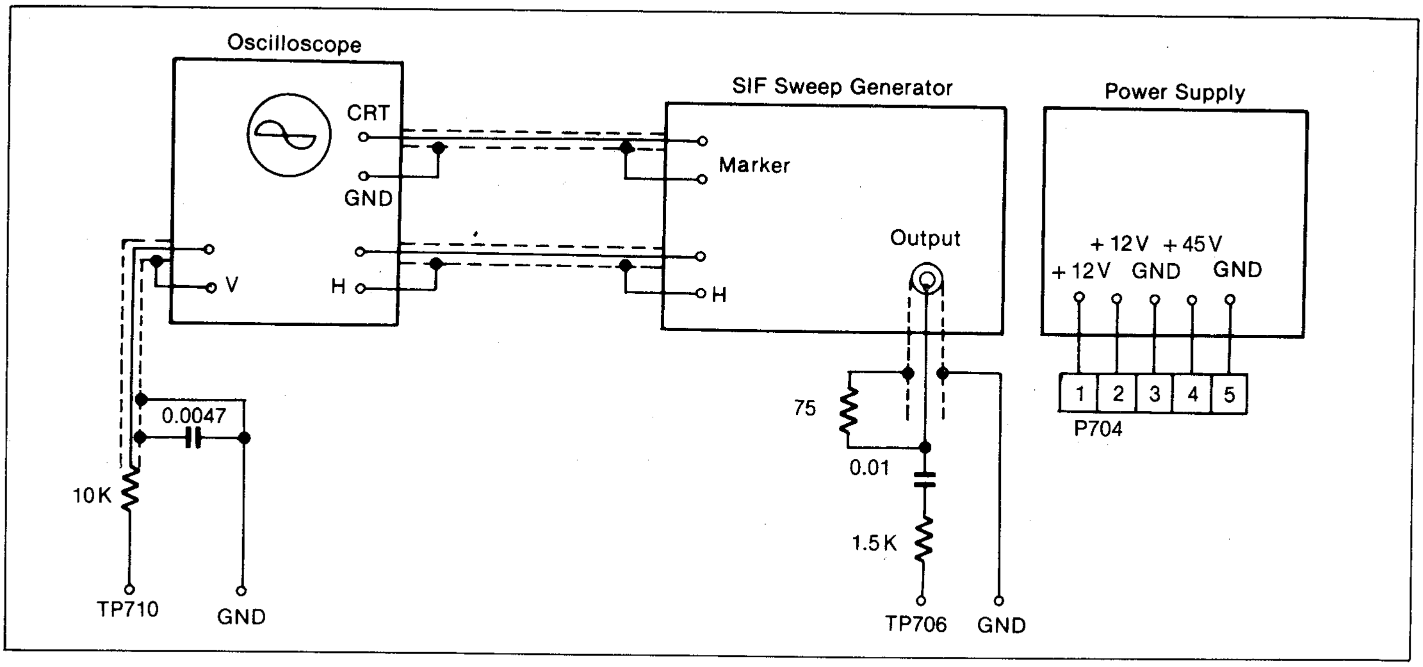

Oscilloscope
CRT
GND
V
H
SIF Sweep Generator
Marker
Output
H
Power Supply
+12V +45V
+12V GND GND
1
2
3
4
5
P704
0.0047
10K
TP710
GND
75
0.01
1.5K
TP706
GND

Fig. 6 Test Equipment Connection

4. Set the sweep output to 250Vr.m.s, 75Ω unbalanced.
5. Adjust T705 for maximum peak-to-peak amplitude of response "A" curve as shown in Fig. 7.
6. Confirm that the level between the 150KHz marker positions is more than 2.0V.

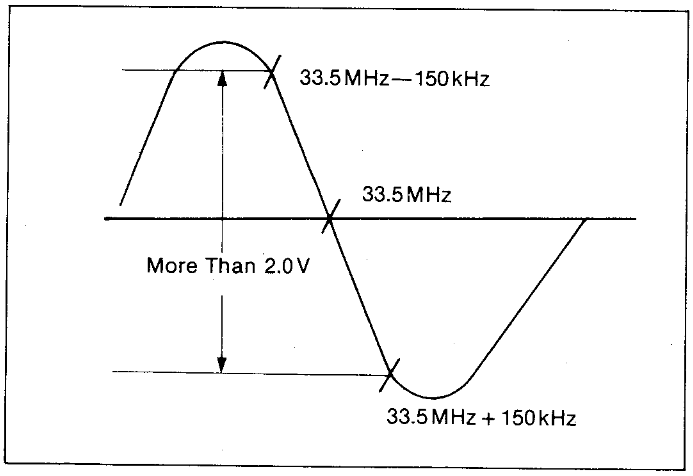


Fig. 7 Response "A" Curve

D. AFC Adjustment

1. Connect CW Oscillator to Tuner TP and supply 39.5MHz CW signal.
2. Adjust the 39.5MHz CW signal for satulation level at TP707.
3. Connect the VTVM to Tuner AFC terminal.
4. Set the AFC switch "ON"
5. Adjust T703 so that the level at AFC terminal becomes 6.5 ± 0.3V.
6. Change the frequency of CW oscillator ± 100KHz, centerd at 39.5MHz and confirm that the change of AFC voltage is more than 2V.

E. Confirmation of Video level/Adjustment of burst level

1. Supply the PAL Standard Colour Bar signal to ANT.
2. connect the resistor 75 to Video out.
3. Connect the oscilloscope to TP705.
4. Confirm that the video level at TP702 is 1.0 ± 0.2Vp-p as shown in Fig.8.
5. Adjust R718 so that the burst level becomes 200 ± 20mVp-p as shown in Fig.8.

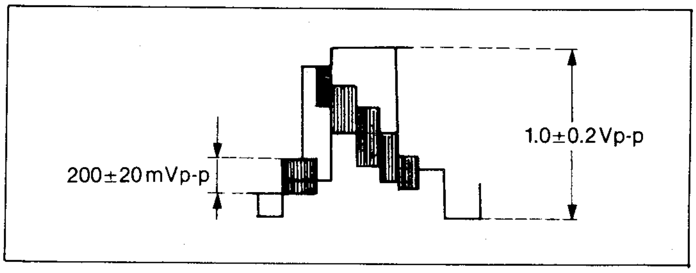


Fig. 8 Video and Burst Levels

ADJUSTMENT OF MODEL ENC-17352 RF CONVERTER

1. Rating

1-1. Channel : CH36 (591.25MHz)
1-2. Supply Voltage : 9 ± 0.1 V
1-3. RF output impedance: 75Ω unbal
1-4. Video Input Voltage: 1 ± 0.2 Vp-p
1-5. Audio Input Voltage: 0.5 ± 0.1 Vrms
1-6. Sub-Carrier Freq. : 6000 kHz

2. Adjustment

2-1. Adjust the variable resistor (VR4) in order to get 591.25 MHz oscillator requency.
2-2. Adjust the variable resistor (VR2) in order to get 73 ± 3 dB video RF output level.
2-3. Adjust the variable resistor (VR1) in order to get 70 $^{+5}_{-10}$ % video modulation ratio using standard color bar pattern.
2-4. Adjust the trans (T2) in order to get 6.0 MHz oscillator frequency.
2-5. Adjust the trans (T1) in order to get sound output level -14 ± 3 dB against video output level.
2-6. Adjust the variable resistor (VR3) in order to get 70 ± 10 % sound modulation ratio using 1 kHz sine wave.

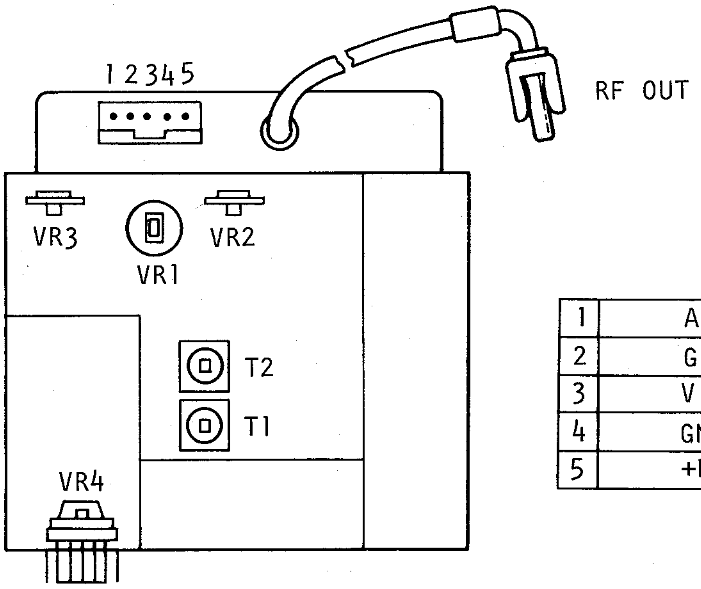
ADJUSTMENT OF MODEL ENC-17351 RF CONVERTER

1. Rating

1-1. Channel : CH36(591.25MHz)
1-2. Supply Voltage : 9 ± 0.1V
1-3. RF output impedance : 75Ω unbal
1-4. Video Input Voltage : 1 ± 0.2 Vp-p
1-5. Audio Input Voltage : 0.5 ± 0.1 Vrms
1-6. Sub-Carrier Freq. : 5500 kHz

2. Adjustment

2-1. Adjust the variable resistor (VR4) in order to get 591.25 MHz oscillator requency
2-2. Adjust the variable resistor (VR2) in order to get 73 ± 3 dB video-RF output level.
2-3. Adjust the variable resistor (VR1) in order to get 70 $^{+5}_{-10}$ % video modulation ratio using standard color bar pattern.
2-4. Adjust the trans (T2) in order to get 5.5 MHz oscillator frequency.
2-5. Adjust the trans (T1) in order to get sound output level -14 ± 3 dB against video output level.
2-6. Adjust the variable resistor (VR3) in order to get 70 ± 10 % sound modulation ratio using 1 kHz sine wave.



1	AUDIO IN
2	GND
3	VIDEO IN
4	GND
5	+B

ORDER NO. VRD-8005-393

Service Manual

Video Cassette Recorder

Vol. 3

Panasonic VHS

NV-7000-E -B

Block Diagrams
Schematic Diagrams

SPECIFICATIONS

Power Source: NV-7000-E, -B, 110, 120, 220, 240V AC 50/60Hz
Power Consumption: Approx. 52 watts
Television System: CCIR: 625 lines, 50 fields
PAL colour signal
Video Recording System: 2 rotary heads, helical scanning system
Luminance: FM azimuth recording
Colour signal: converted subcarrier phase shift recording
Audio Track: 1 track
Tape Format: Tape width 12.7mm high density tape
Tape Speed: 23.39mm/s
Record/Playback Time: 180 min. with NV-E180
FF/REW Time: Less than 4.5 min. with NV-E180
Heads: Video: 2 rotary heads
Audio/Control: 1 stationary head
Erase: 1 full track erase
Input Level: Video: VIDEO IN connector (BNC)
1.0Vp-p, 75Ω unbalanced
Audio: MIC IN jack
−70dB, 600Ω unbalanced
LINE IN jack
−20dB, 100kΩ unbalanced

Output Level: Video: VIDEO OUT connector (BNC)
1.0Vp-p, 75Ω unbalanced
Audio: LINE OUT jack
−6dB, 600Ω unbalanced
RF Modulated: UHF channel 36 (±4)
75Ω unbalanced
Weight: 12.7kg
Dimensions: 480(W)×136(H)×356(D)mm
Accessories Supplied: 1 pc. Video cassette tape, NV-E120
1 pc. DIN-DIN coaxial cable, VJA0130
1 pc. Dust cover, VFB0008
1 pc. Remote control unit, VSQ0117, Approx. 5m
Optional Accessories: Video cassette tape:
NV-E180 Approx. 258m, 180 min.
NV-E120 Approx. 174m, 120 min.
NV-E60 Approx. 88m, 60 min.
Video camera, WV-3300E
Wireless remote controller, NV-A700
Microphone

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

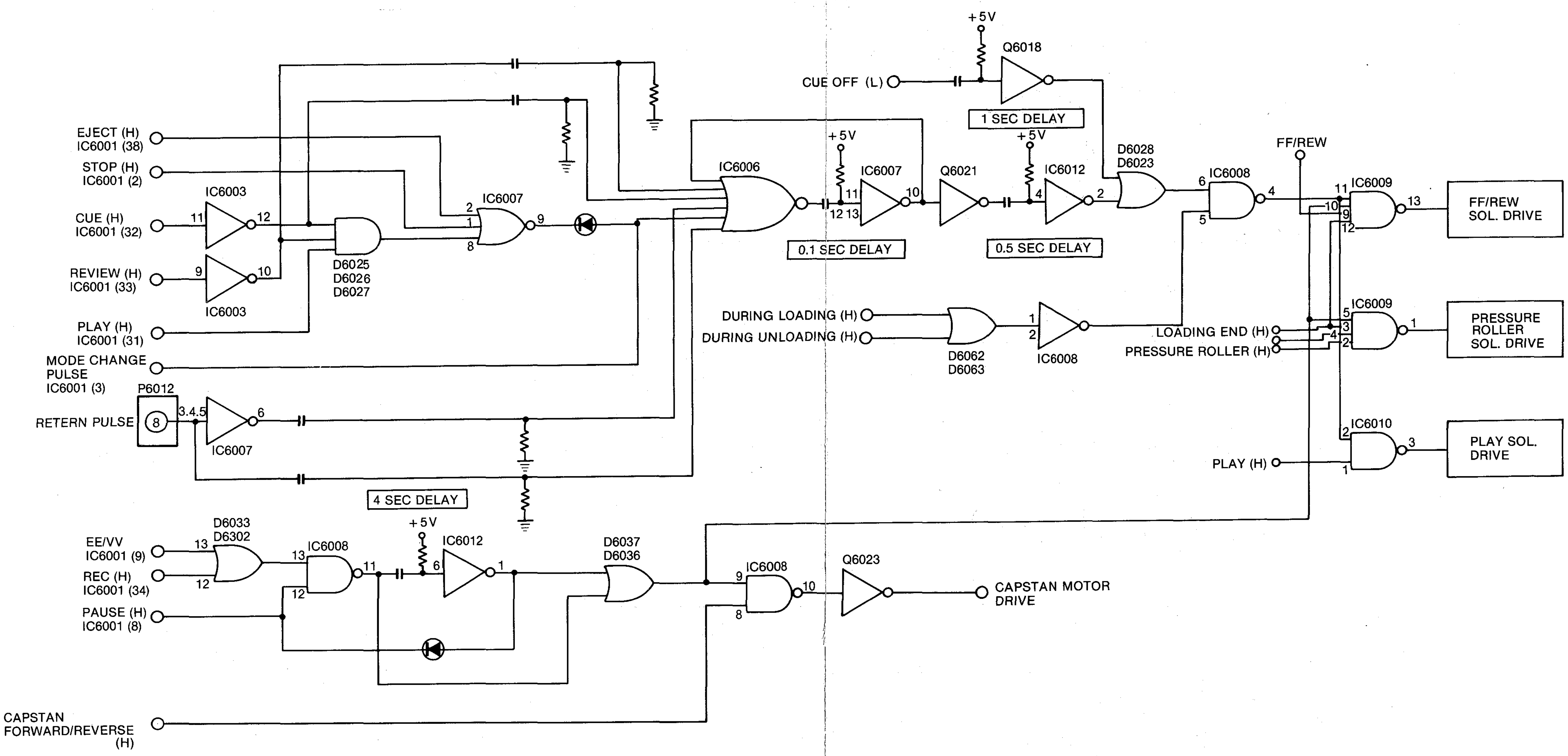
Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

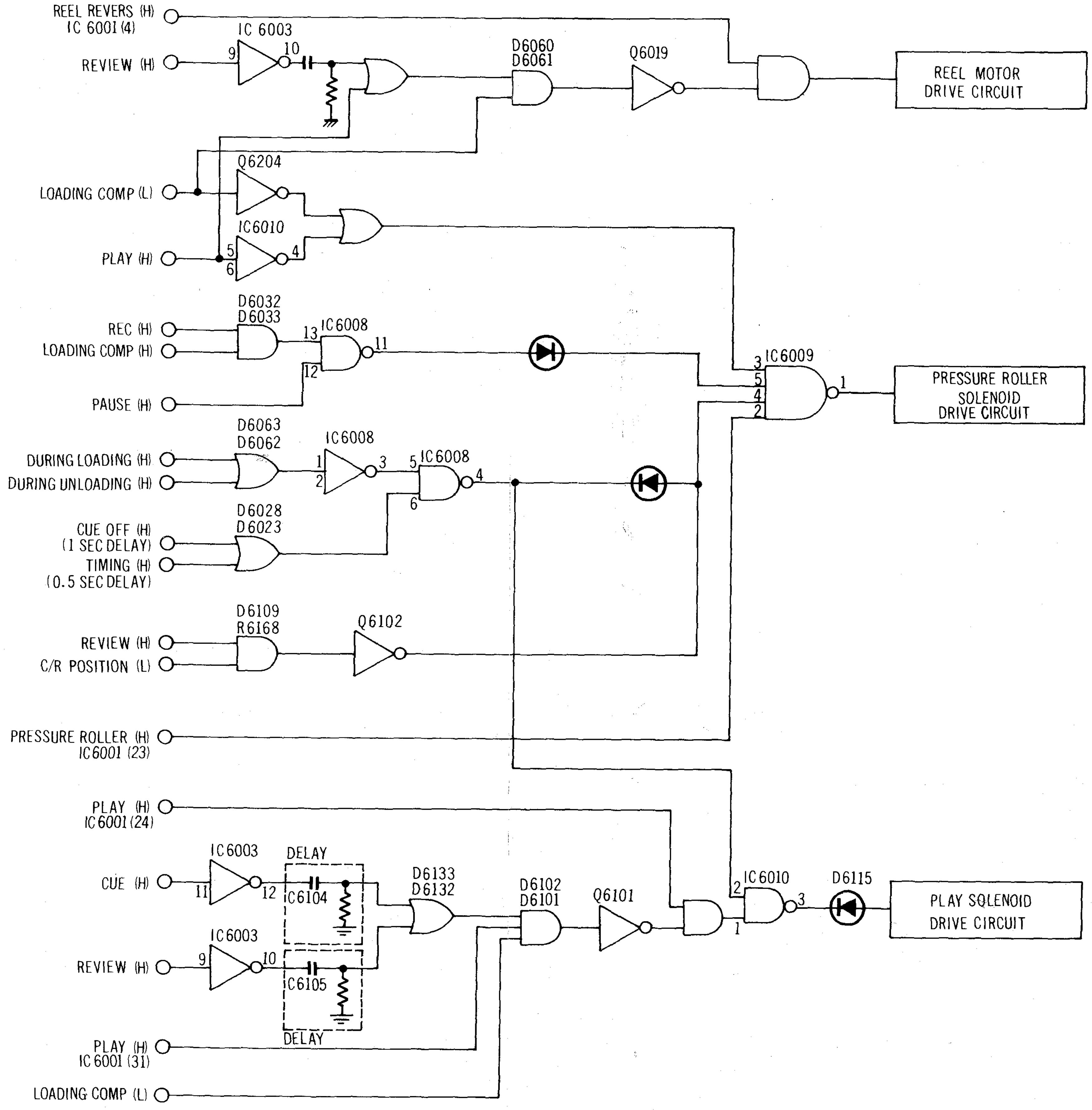
CONTENTS

SPECIFICATIONS .... Cover
BLOCK DIAGRAMS 3-1
  System Control, Timing Circuit 3-1
  System Control, Play Mode 3-2
  System Control, FF/Rew Mode 3-3
  System Control, Cue/Review/Short Rewind 3-4
  Audio 3-5
  Luminance Process 3-6
  Chrominance Process 3-7
  Cylinder Servo 3-8
  Capstan Servo 3-9
  Still Circuit, Still Advance 3-10
  Still Circuit, Artificial Pulse Generator 3-11
  TV Demodulator 3-12
  Programmable Timer 3-14
  RF Converter 3-15
SCHMATIC & CIRCUIT BOARD DIAGRAMS 3-16
  Power Supply Circuit 3-19
  Servo & Sub-System Control Circuit 3-20
  Still Circuit 3-22
  Operation Circuit 3-23
  Remote Control Circuit 3-23
  Luminance & Chrominance Circuit 3-24
  System Control I Circuit 3-26
  System Control II Circuit 3-28
  Audio Circuit 3-30
  Programmable Timer Circuit 3-32
  TV Demodulator/Tuner/Channel Indicator & Select Circuit3-34
  RF Converter Circuit 3-36
  Circuit Board Layout 3-36
  Interconnection Schematic Diagram 3-37

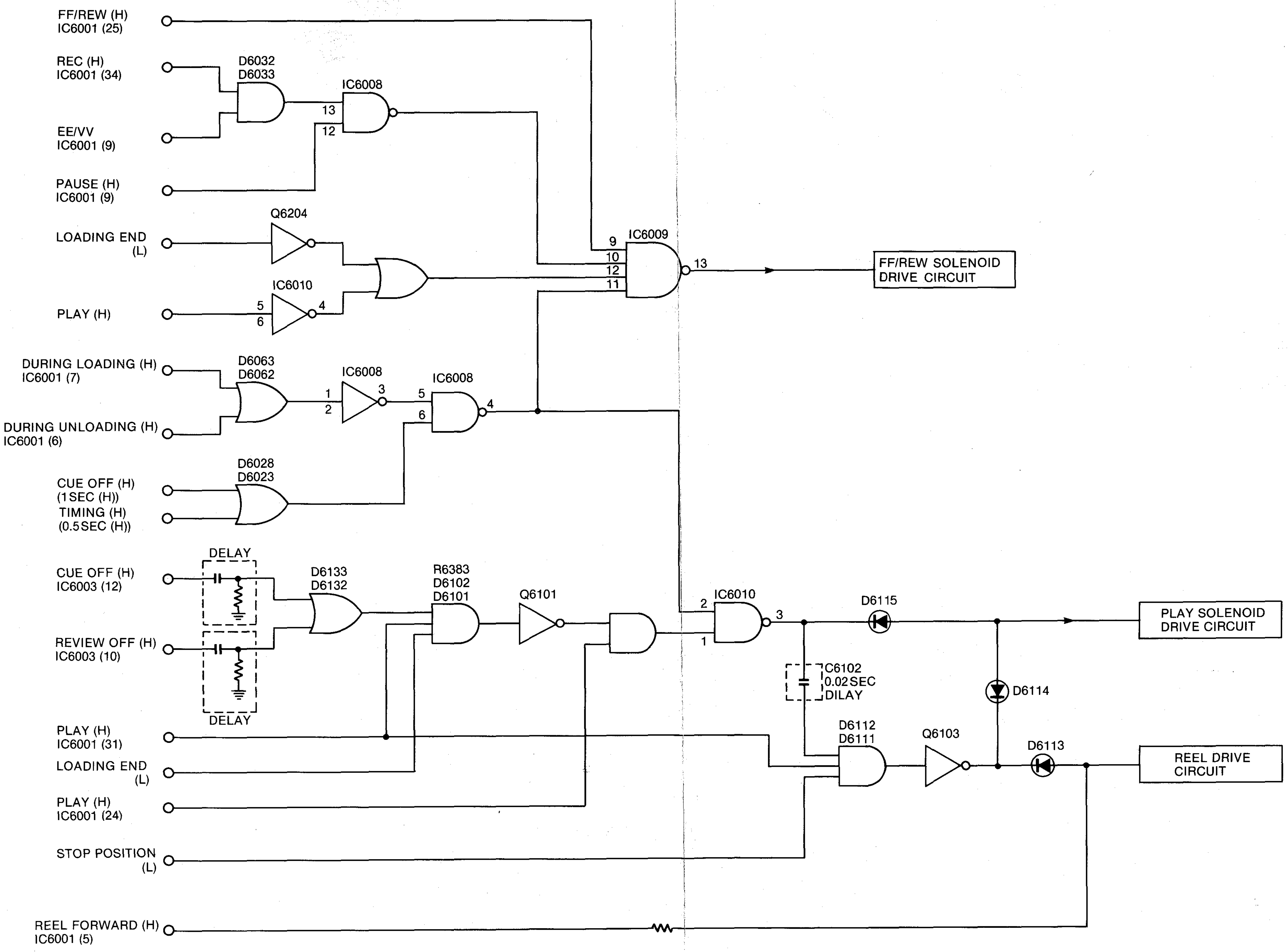
SYSTEM CONTROL BLOCK DIAGRAM *Timing Circuit*


+5V
Q6018
CUE OFF (L)
1 SEC DELAY
EJECT (H)
IC6001 (38)
STOP (H)
IC6001 (2)
IC6003
CUE (H)
IC6001 (32)
REVIEW (H)
IC6001 (33)
IC6003
PLAY (H)
IC6001 (31)
MODE CHANGE
PULSE
IC6001 (3)
P6012
RETERN PULSE
8
3.4.5
6
IC6007
D6025
D6026
D6027
IC6007
IC6006
+5V
IC6007
0.1 SEC DELAY
Q6021
+5V
IC6012
0.5 SEC DELAY
D6028
D6023
IC6008
FF/REW
IC6009
FF/REW
SOL. DRIVE
DURING LOADING (H)
DURING UNLOADING (H)
D6062
D6063
IC6008
LOADING END (H)
PRESSURE ROLLER (H)
IC6009
PRESSURE
ROLLER
SOL. DRIVE
IC6010
PLAY SOL.
DRIVE
PLAY (H)
4 SEC DELAY
EE/VV
IC6001 (9)
REC (H)
IC6001 (34)
PAUSE (H)
IC6001 (8)
D6033
D6302
IC6008
+5V
IC6012
D6037
D6036
IC6008
Q6023
CAPSTAN MOTOR
DRIVE
CAPSTAN
FORWARD/REVERSE
(H)

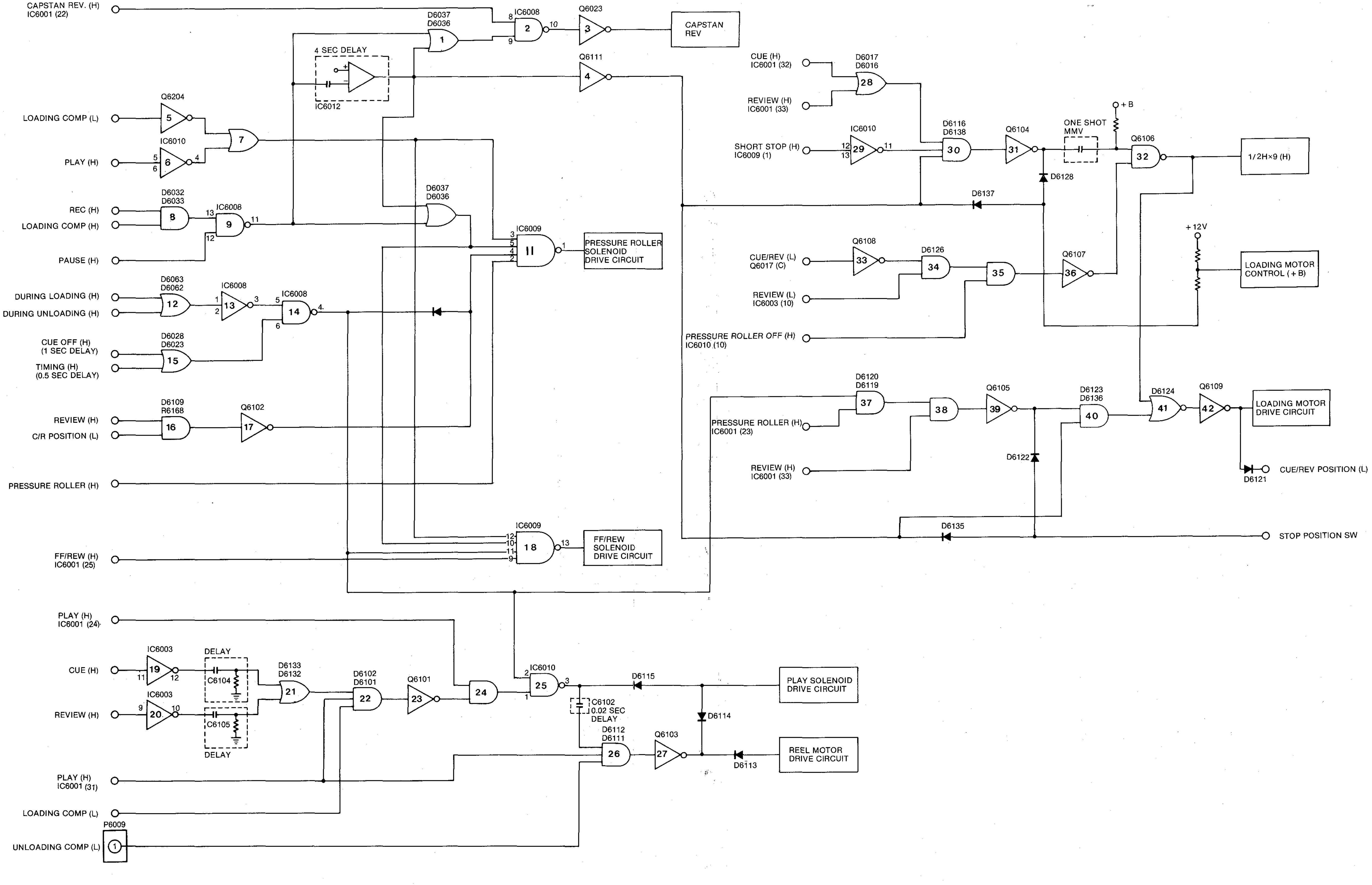
SYSTEM CONTROL BLOCK DIAGRAM *Play Mode*


REEL REVERS (H)
IC 6001 (4)
REVIEW (H)
IC 6003
9
10
D6060
D6061
Q6019
REEL MOTOR DRIVE CIRCUIT
LOADING COMP (L)
Q6204
IC6010
PLAY (H)
5
6
4
REC (H)
LOADING COMP (H)
D6032
D6033
13
IC6008
11
12
PAUSE (H)
IC6009
3
5
4
2
1
PRESSURE ROLLER SOLENOID DRIVE CIRCUIT
D6063
D6062
DURING LOADING (H)
DURING UNLOADING (H)
IC6008
1
2
3
5
IC6008
4
6
D6028
D6023
CUE OFF (H)
(1 SEC DELAY)
TIMING (H)
(0.5 SEC DELAY)
D6109
R6168
Q6102
REVIEW (H)
C/R POSITION (L)
PRESSURE ROLLER (H)
IC6001 (23)
PLAY (H)
IC6001 (24)
IC6003
DELAY
CUE (H)
11
12
C6104
D6133
D6132
D6102
D6101
Q6101
IC6010
2
3
1
D6115
PLAY SOLENOID DRIVE CIRCUIT
IC6003
REVIEW (H)
9
10
C6105
DELAY
PLAY (H)
IC 6001 (31)
LOADING COMP (L)

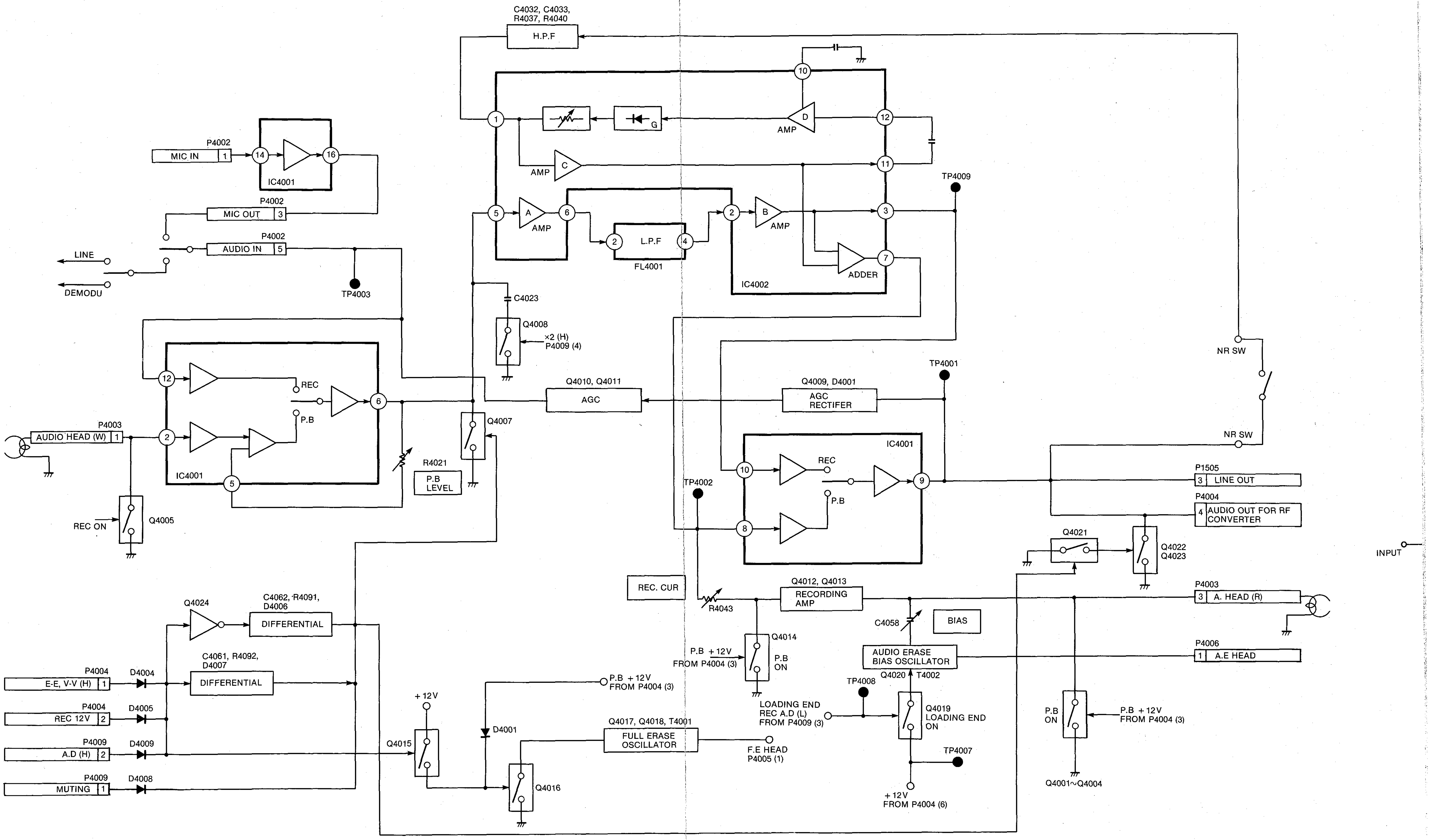
SYSTEM CONTROL BLOCK DIAGRAM *FF/Rew Mode*

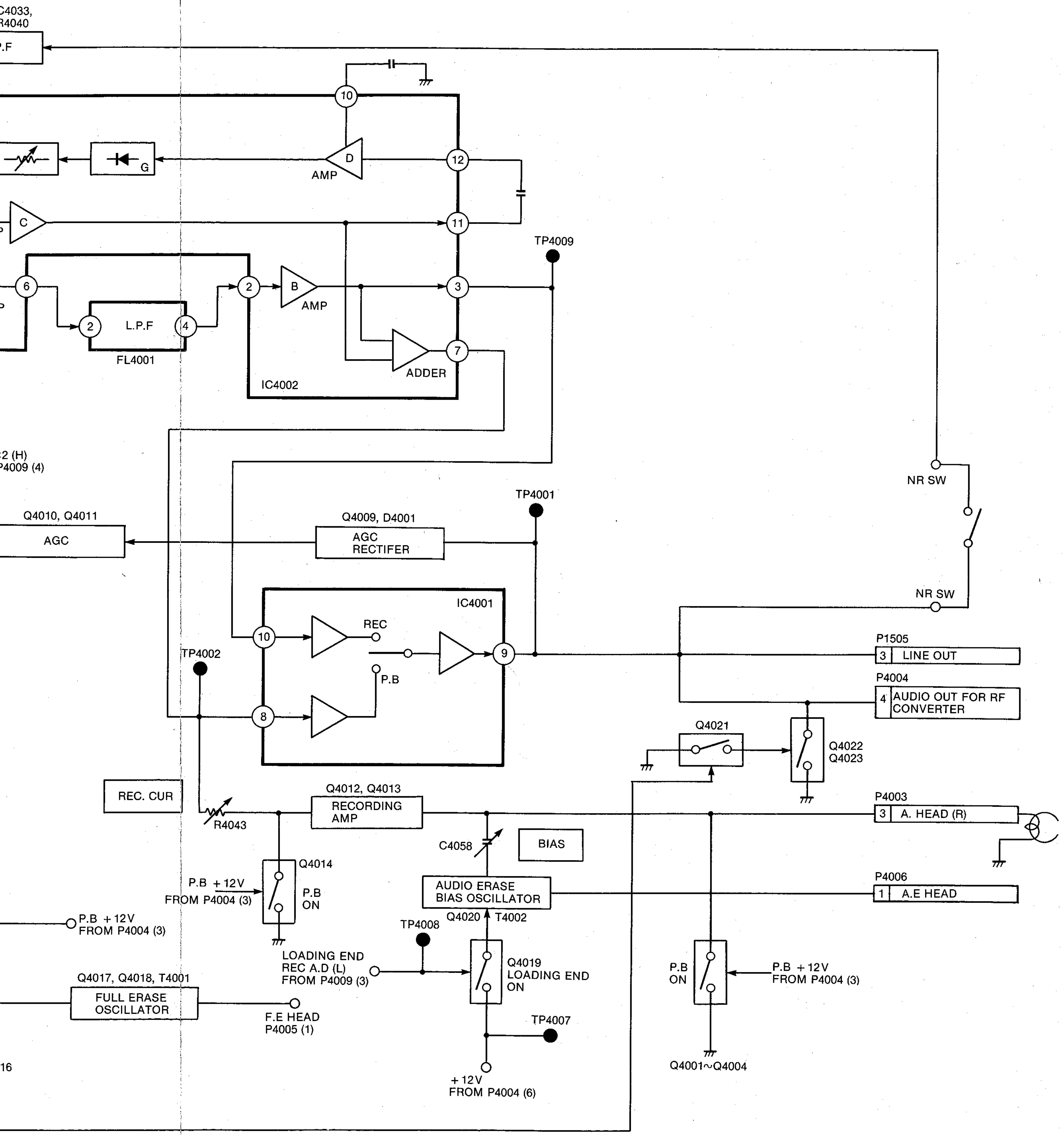

FF/REW (H)
IC6001 (25)
REC (H)
IC6001 (34)
D6032
D6033
IC6008
13
12
EE/VV
IC6001 (9)
PAUSE (H)
IC6001 (9)
Q6204
LOADING END
(L)
IC6009
9
10
12
11
13
FF/REW SOLENOID
DRIVE CIRCUIT
IC6010
5
6
4
PLAY (H)
DURING LOADING (H)
IC6001 (7)
D6063
D6062
IC6008
1
2
3
IC6008
5
6
4
DURING UNLOADING (H)
IC6001 (6)
D6028
D6023
CUE OFF (H)
(1SEC (H))
TIMING (H)
(0.5SEC (H))
DELAY
CUE OFF (H)
IC6003 (12)
D6133
D6132
R6383
D6102
D6101
Q6101
IC6010
2
1
3
D6115
PLAY SOLENOID
DRIVE CIRCUIT
REVIEW OFF (H)
IC6003 (10)
C6102
0.02SEC
DILAY
D6114
DELAY
PLAY (H)
IC6001 (31)
D6112
D6111
Q6103
D6113
REEL DRIVE
CIRCUIT
LOADING END
(L)
PLAY (H)
IC6001 (24)
STOP POSITION
(L)
REEL FORWARD (H)
IC6001 (5)

SYSTEM CONTROL BLOCK DIAGRAM *Cue/Review/Short Rewind*

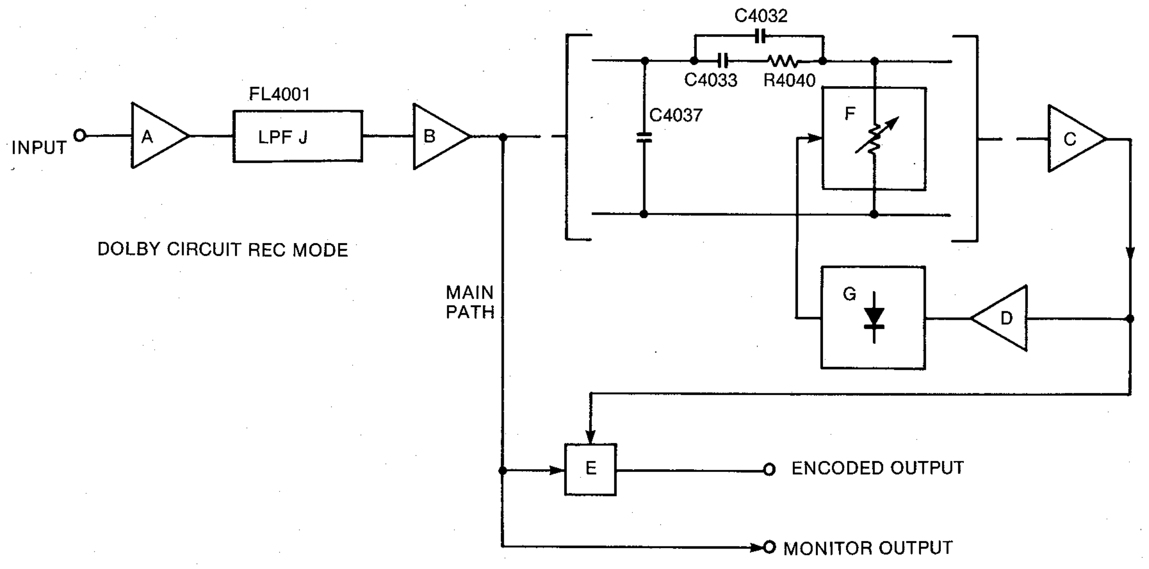

CAPSTAN REV. (H) IC6001 (22)
LOADING COMP (L)
PLAY (H)
REC (H)
LOADING COMP (H)
PAUSE (H)
DURING LOADING (H)
DURING UNLOADING (H)
CUE OFF (H) (1 SEC DELAY)
TIMING (H) (0.5 SEC DELAY)
REVIEW (H)
C/R POSITION (L)
PRESSURE ROLLER (H)
FF/REW (H) IC6001 (25)
PLAY (H) IC6001 (24)
CUE (H)
REVIEW (H)
PLAY (H) IC6001 (31)
LOADING COMP (L)
UNLOADING COMP (L)
P6009
D6037 D6036
IC6008
Q6023
CAPSTAN REV
4 SEC DELAY
IC6012
Q6111
Q6204
IC6010
D6032 D6033
IC6009
PRESSURE ROLLER SOLENOID DRIVE CIRCUIT
D6063 D6062
D6028 D6023
D6109 R6168
Q6102
FF/REW SOLENOID DRIVE CIRCUIT
IC6003
DELAY
C6104
C6105
D6133 D6132
D6102 D6101
Q6101
C6102 0.02 SEC DELAY
D6115
D6114
D6112 D6111
Q6103
D6113
PLAY SOLENOID DRIVE CIRCUIT
REEL MOTOR DRIVE CIRCUIT
CUE (H) IC6001 (32)
REVIEW (H) IC6001 (33)
D6017 D6016
SHORT STOP (H) IC6009 (1)
D6116 D6138
Q6104
ONE SHOT MMV
+B
Q6106
1/2H×9 (H)
D6128
D6137
+12V
CUE/REV (L) Q6017 (C)
Q6108
D6126
Q6107
LOADING MOTOR CONTROL (+B)
REVIEW (L) IC6003 (10)
PRESSURE ROLLER OFF (H) IC6010 (10)
D6120 D6119
Q6105
D6123 D6136
D6124
Q6109
LOADING MOTOR DRIVE CIRCUIT
PRESSURE ROLLER (H) IC6001 (23)
REVIEW (H) IC6001 (33)
D6122
D6121
CUE/REV POSITION (L)
D6135
STOP POSITION SW

AUDIO BLOCK DIAGRAM


C4032, C4033,
R4037, R4040
H.P.F
10
1
D
AMP
12
G
11
C
AMP
TP4009
5
A
AMP
6
2
B
AMP
3
2
L.P.F
4
FL4001
7
ADDER
IC4002
P4002
MIC IN
1
14
16
IC4001
P4002
MIC OUT
3
P4002
AUDIO IN
5
LINE
DEMODU
TP4003
C4023
Q4008
×2 (H)
P4009 (4)
12
REC
6
P.B
P4003
AUDIO HEAD (W)
1
2
IC4001
5
R4021
P.B
LEVEL
Q4007
Q4010, Q4011
AGC
Q4009, D4001
AGC
RECTIFER
TP4001
NR SW
NR SW
REC ON
Q4005
IC4001
REC
10
9
TP4002
P.B
8
P1505
3
LINE OUT
P4004
4
AUDIO OUT FOR RF
CONVERTER
Q4021
Q4022
Q4023
INPUT
REC. CUR
Q4012, Q4013
RECORDING
AMP
R4043
P4003
3
A. HEAD (R)
Q4024
C4062, R4091,
D4006
DIFFERENTIAL
C4058
BIAS
Q4014
P.B +12V
FROM P4004 (3)
P.B
ON
AUDIO ERASE
BIAS OSCILLATOR
Q4020
T4002
P4006
1
A.E HEAD
C4061, R4092,
D4007
DIFFERENTIAL
P4004
E-E, V-V (H)
1
D4004
P.B +12V
FROM P4004 (3)
TP4008
+12V
LOADING END
REC A.D (L)
FROM P4009 (3)
Q4019
LOADING END
ON
P.B
ON
P.B +12V
FROM P4004 (3)
P4004
REC 12V
2
D4005
D4001
Q4017, Q4018, T4001
FULL ERASE
OSCILLATOR
F.E HEAD
P4005 (1)
TP4007
P4009
A.D (H)
2
D4009
Q4015
Q4016
+12V
FROM P4004 (6)
Q4001~Q4004
P4009
MUTING
1
D4008

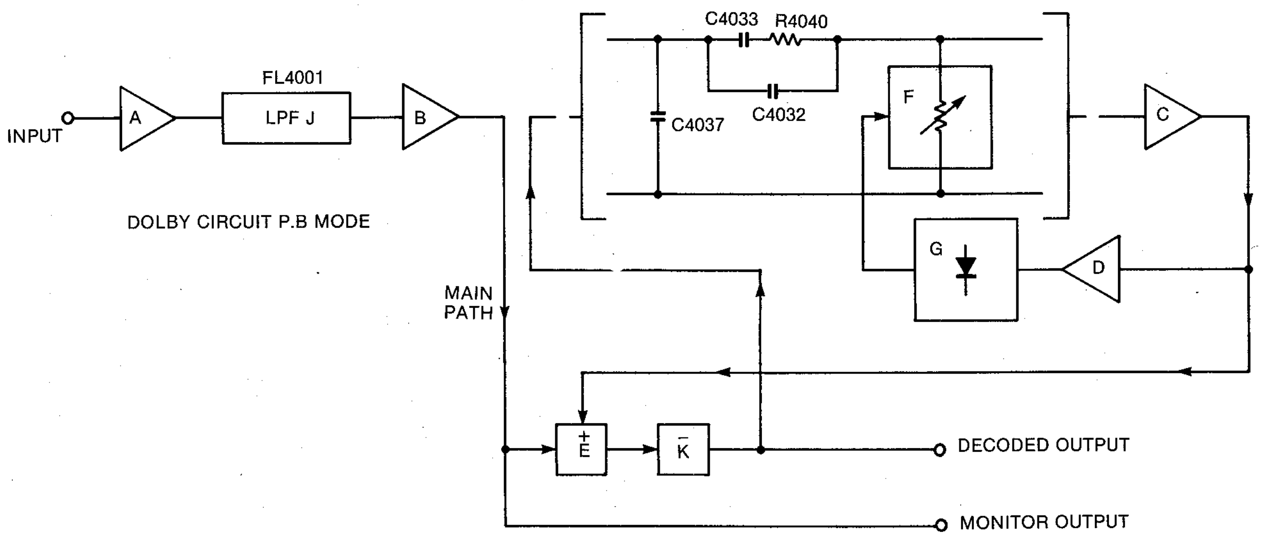

C4033,
R4040
.F
10
D
AMP
G
12
C
11
TP4009
6
2
L.P.F
4
FL4001
2
B
AMP
3
ADDER
7
IC4002
2 (H)
P4009 (4)
Q4010, Q4011
AGC
Q4009, D4001
AGC
RECTIFER
TP4001
NR SW
NR SW
IC4001
REC
10
9
P.B
8
TP4002
P1505
3 LINE OUT
P4004
4 AUDIO OUT FOR RF CONVERTER
Q4021
Q4022
Q4023
REC. CUR
Q4012, Q4013
RECORDING
AMP
R4043
C4058
BIAS
P4003
3 A. HEAD (R)
Q4014
P.B +12V
FROM P4004 (3)
P.B
ON
AUDIO ERASE
BIAS OSCILLATOR
Q4020
T4002
P4006
1 A.E HEAD
P.B +12V
FROM P4004 (3)
TP4008
LOADING END
REC A.D (L)
FROM P4009 (3)
Q4019
LOADING END
ON
P.B
ON
P.B +12V
FROM P4004 (3)
Q4017, Q4018, T4001
FULL ERASE
OSCILLATOR
F.E HEAD
P4005 (1)
TP4007
16
+12V
FROM P4004 (6)
Q4001~Q4004

Dolby Circuit, Rec Mode


C4032
C4033
R4040
FL4001
INPUT
A
LPF J
B
C4037
F
C
MAIN
PATH
G
D
E
ENCODED OUTPUT
MONITOR OUTPUT

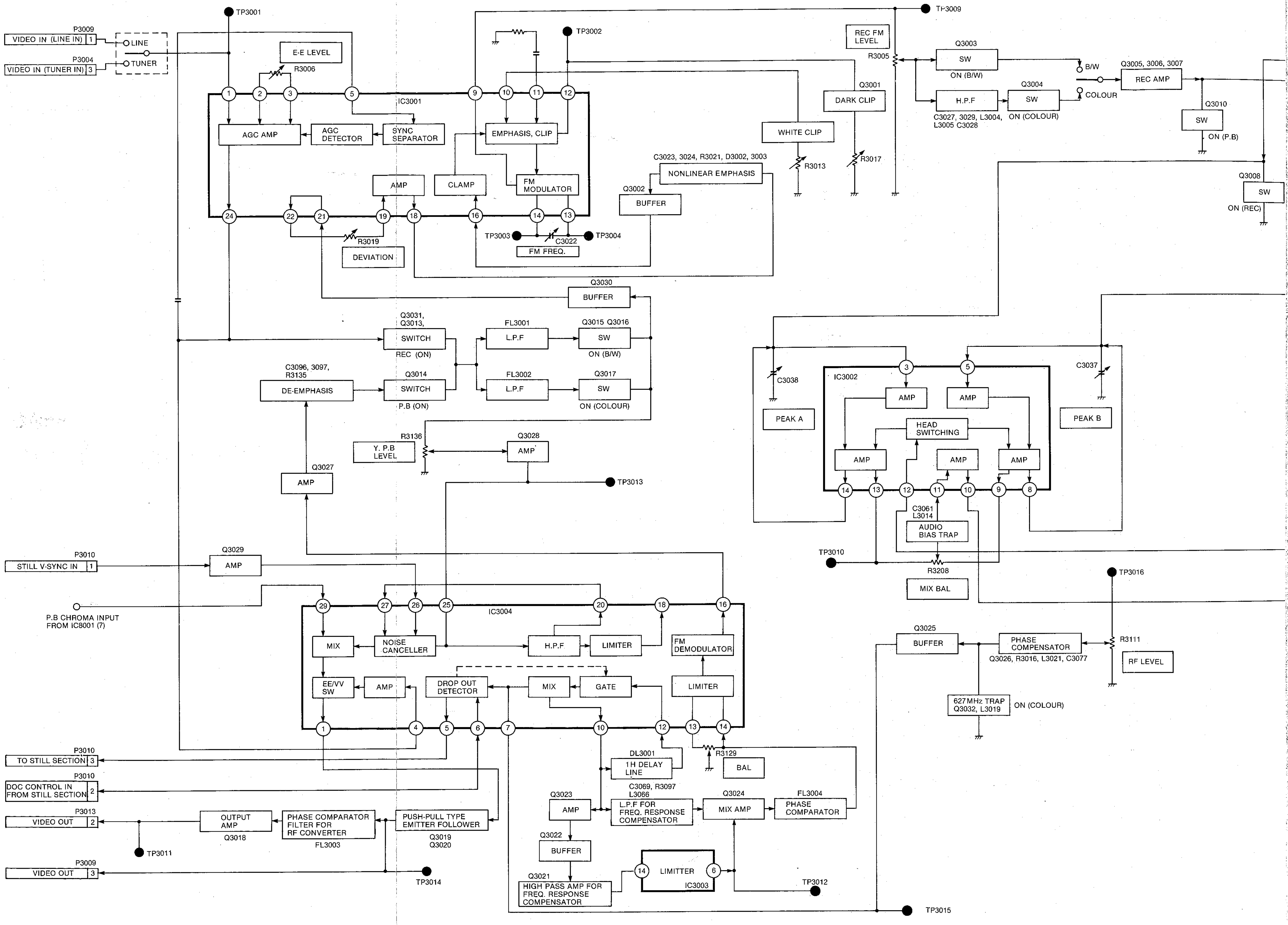
DOLBY CIRCUIT REC MODE

Dolby Circuit, Play Mode

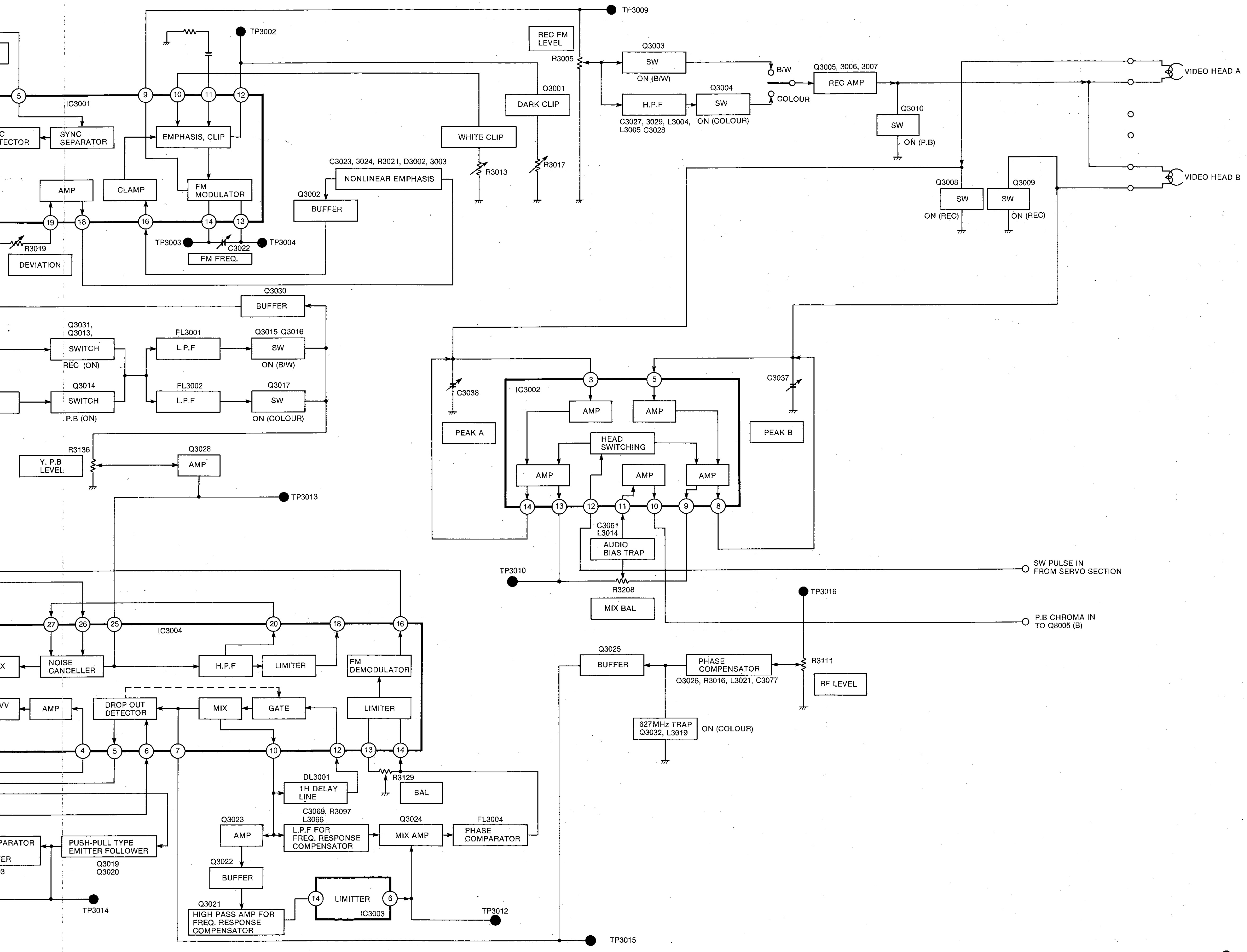

C4033
R4040
FL4001
INPUT
A
LPF J
B
C4037
C4032
F
C
MAIN
PATH
G
D
E
K
DECODED OUTPUT
MONITOR OUTPUT

DOLBY CIRCUIT P.B MODE

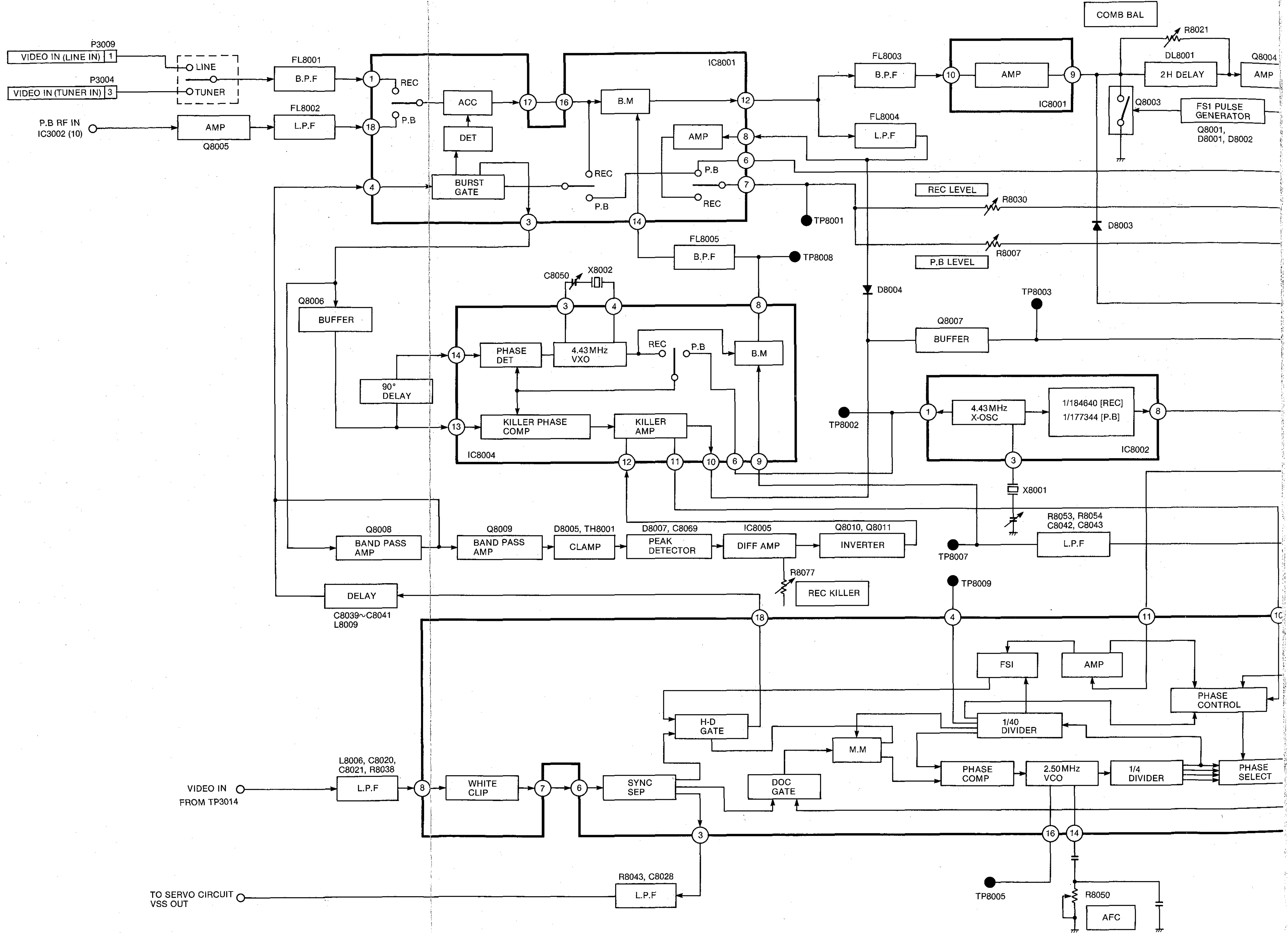
LUMINANCE PROCESS BLOCK DIAGRAM


TP3001
P3009
VIDEO IN (LINE IN) 1
LINE
P3004
VIDEO IN (TUNER IN) 3
TUNER
E-E LEVEL
R3006
IC3001
AGC AMP
AGC DETECTOR
SYNC SEPARATOR
EMPHASIS, CLIP
AMP
CLAMP
FM MODULATOR
TP3002
TP3003
TP3004
C3022
FM FREQ.
R3019
DEVIATION
TP3009
REC FM LEVEL
R3005
Q3001
DARK CLIP
R3017
WHITE CLIP
R3013
Q3003
SW
ON (B/W)
H.P.F
C3027, 3029, L3004, L3005 C3028
Q3004
SW
ON (COLOUR)
B/W
COLOUR
Q3005, 3006, 3007
REC AMP
Q3010
SW
ON (P.B)
Q3008
SW
ON (REC)
C3023, 3024, R3021, D3002, 3003
NONLINEAR EMPHASIS
Q3002
BUFFER
Q3030
BUFFER
Q3031, Q3013,
SWITCH
REC (ON)
FL3001
L.P.F
Q3015 Q3016
SW
ON (B/W)
C3096, 3097, R3135
DE-EMPHASIS
Q3014
SWITCH
P.B (ON)
FL3002
L.P.F
Q3017
SW
ON (COLOUR)
R3136
Y. P.B LEVEL
Q3028
AMP
Q3027
AMP
TP3013
IC3002
C3038
PEAK A
C3037
PEAK B
AMP
AMP
HEAD SWITCHING
AMP
AMP
AMP
C3061 L3014
AUDIO BIAS TRAP
TP3010
R3208
MIX BAL
TP3016
P3010
STILL V-SYNC IN 1
Q3029
AMP
P.B CHROMA INPUT FROM IC8001 (7)
IC3004
MIX
NOISE CANCELLER
H.P.F
LIMITER
FM DEMODULATOR
EE/VV SW
AMP
DROP OUT DETECTOR
MIX
GATE
LIMITER
Q3025
BUFFER
PHASE COMPENSATOR
Q3026, R3016, L3021, C3077
R3111
RF LEVEL
627MHz TRAP Q3032, L3019
ON (COLOUR)
P3010
TO STILL SECTION 3
P3010
DOC CONTROL IN FROM STILL SECTION 2
P3013
VIDEO OUT 2
P3009
VIDEO OUT 3
TP3011
OUTPUT AMP
Q3018
PHASE COMPARATOR FILTER FOR RF CONVERTER
FL3003
PUSH-PULL TYPE EMITTER FOLLOWER
Q3019 Q3020
TP3014
R3129
BAL
DL3001
1H DELAY LINE
C3069, R3097 L3066
L.P.F FOR FREQ. RESPONSE COMPENSATOR
Q3023
AMP
Q3024
MIX AMP
FL3004
PHASE COMPARATOR
Q3022
BUFFER
Q3021
HIGH PASS AMP FOR FREQ. RESPONSE COMPENSATOR
LIMITTER
IC3003
TP3012
TP3015

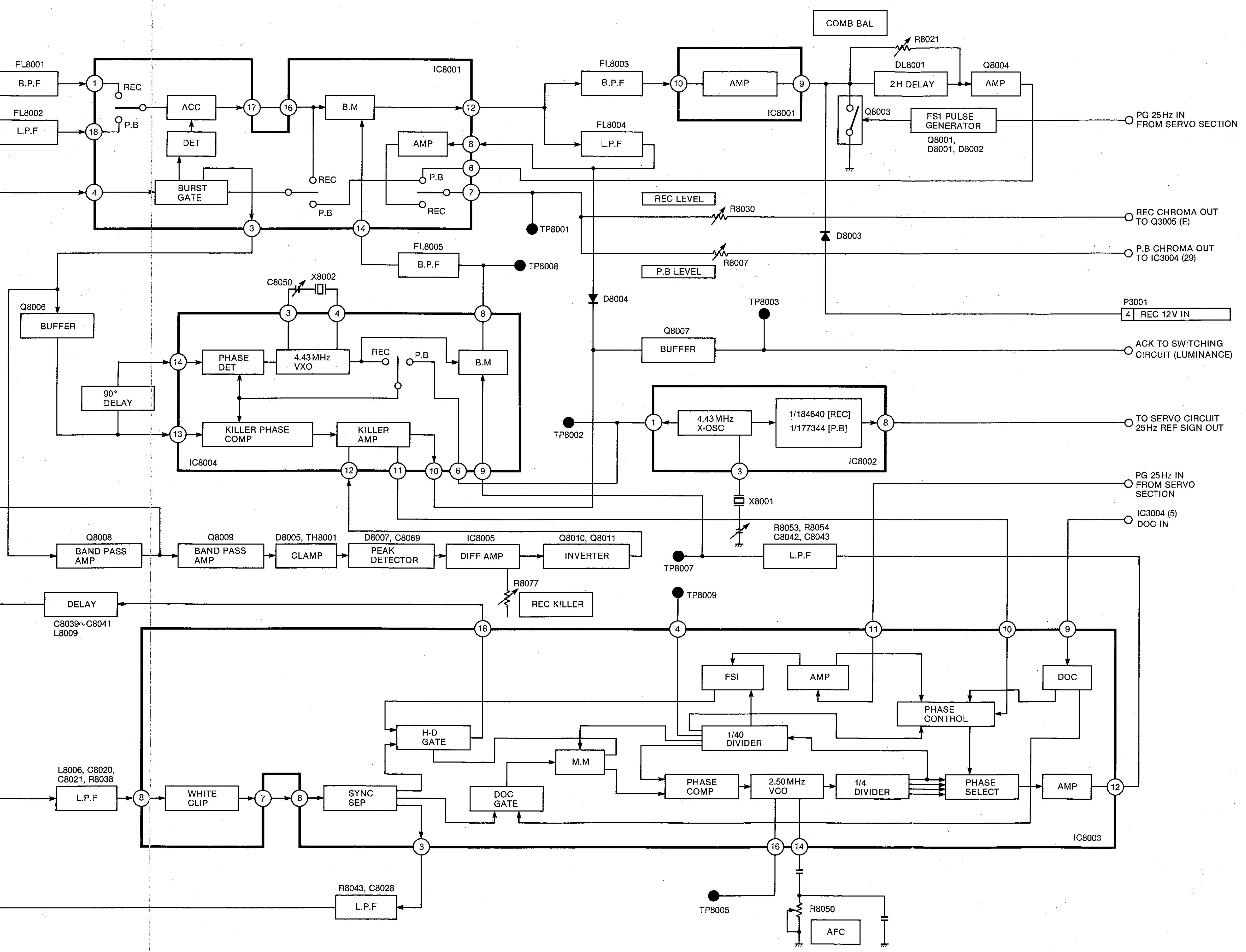
LOCK DIAGRAM


TP3009
TP3002
REC FM LEVEL
R3005
Q3003
SW
ON (B/W)
B/W
Q3005, 3006, 3007
REC AMP
VIDEO HEAD A
Q3004
SW
COLOUR
H.P.F
ON (COLOUR)
C3027, 3029, L3004, L3005 C3028
Q3001
DARK CLIP
Q3010
SW
ON (P.B)
5
IC3001
9
10
11
12
SYNC SEPARATOR
C
TECTOR
EMPHASIS, CLIP
WHITE CLIP
R3013
R3017
C3023, 3024, R3021, D3002, 3003
NONLINEAR EMPHASIS
Q3002
BUFFER
AMP
CLAMP
FM MODULATOR
19
18
16
14
13
TP3003
TP3004
C3022
FM FREQ.
R3019
DEVIATION
Q3008
SW
ON (REC)
Q3009
SW
ON (REC)
VIDEO HEAD B
Q3030
BUFFER
Q3031, Q3013,
SWITCH
REC (ON)
FL3001
L.P.F
Q3015 Q3016
SW
ON (B/W)
Q3014
SWITCH
P.B (ON)
FL3002
L.P.F
Q3017
SW
ON (COLOUR)
R3136
Y. P.B LEVEL
Q3028
AMP
TP3013
IC3002
3
5
AMP
AMP
C3038
C3037
PEAK A
PEAK B
HEAD SWITCHING
AMP
AMP
AMP
14
13
12
11
10
9
8
C3061
L3014
AUDIO BIAS TRAP
TP3010
R3208
MIX BAL
SW PULSE IN FROM SERVO SECTION
TP3016
P.B CHROMA IN TO Q8005 (B)
27
26
25
IC3004
20
18
16
X
NOISE CANCELLER
H.P.F
LIMITER
FM DEMODULATOR
Q3025
BUFFER
PHASE COMPENSATOR
Q3026, R3016, L3021, C3077
R3111
RF LEVEL
VV
AMP
DROP OUT DETECTOR
MIX
GATE
LIMITER
627MHz TRAP Q3032, L3019
ON (COLOUR)
4
5
6
7
10
12
13
14
R3129
BAL
DL3001
1H DELAY LINE
C3069, R3097 L3066
L.P.F FOR FREQ. RESPONSE COMPENSATOR
Q3023
AMP
Q3024
MIX AMP
FL3004
PHASE COMPARATOR
PARATOR
ER
3
PUSH-PULL TYPE EMITTER FOLLOWER
Q3019
Q3020
Q3022
BUFFER
Q3021
HIGH PASS AMP FOR FREQ. RESPONSE COMPENSATOR
14
LIMITTER
6
IC3003
TP3012
TP3014
TP3015

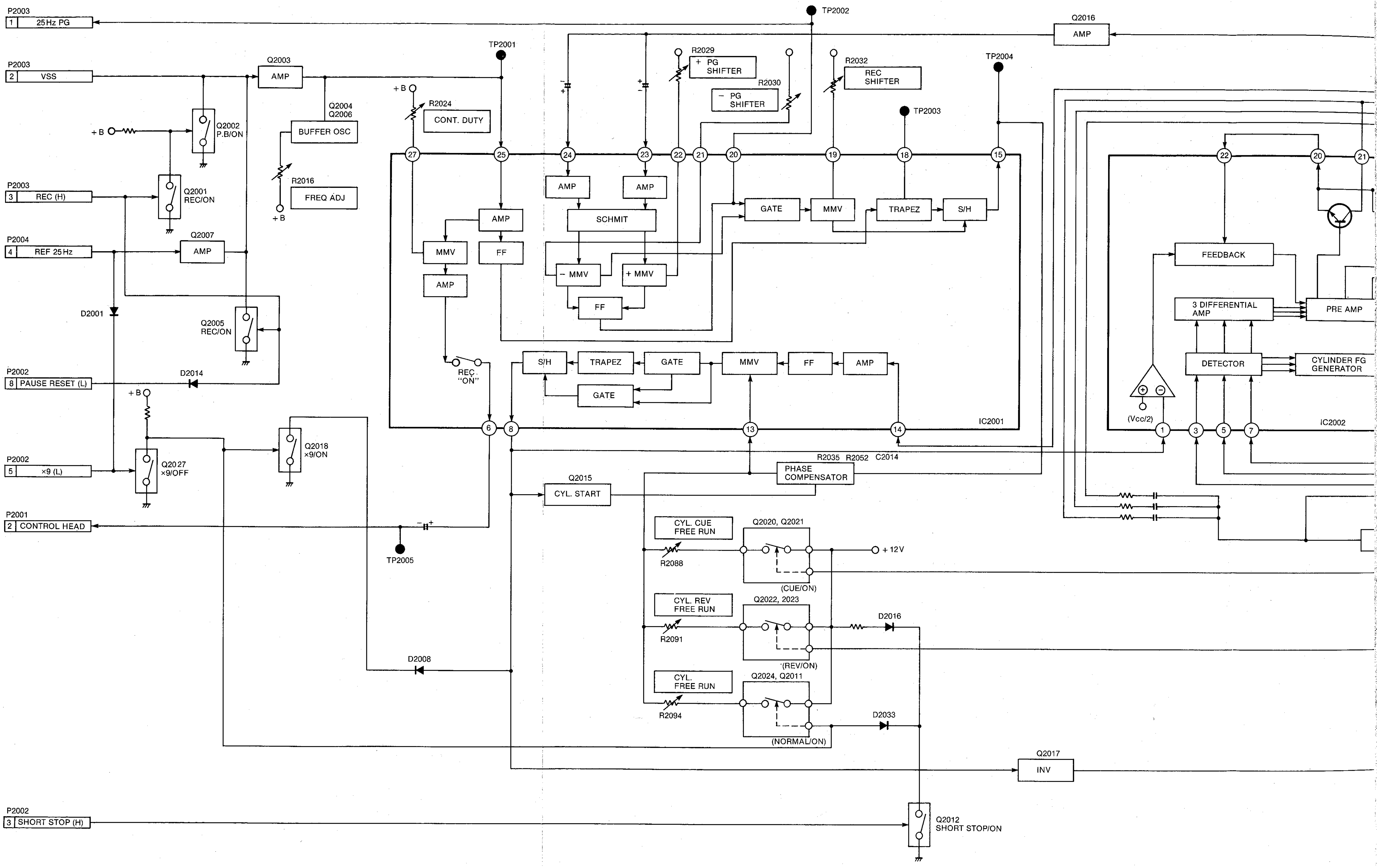
CHROMINANCE PROCESS BLOCK DIAGRAM

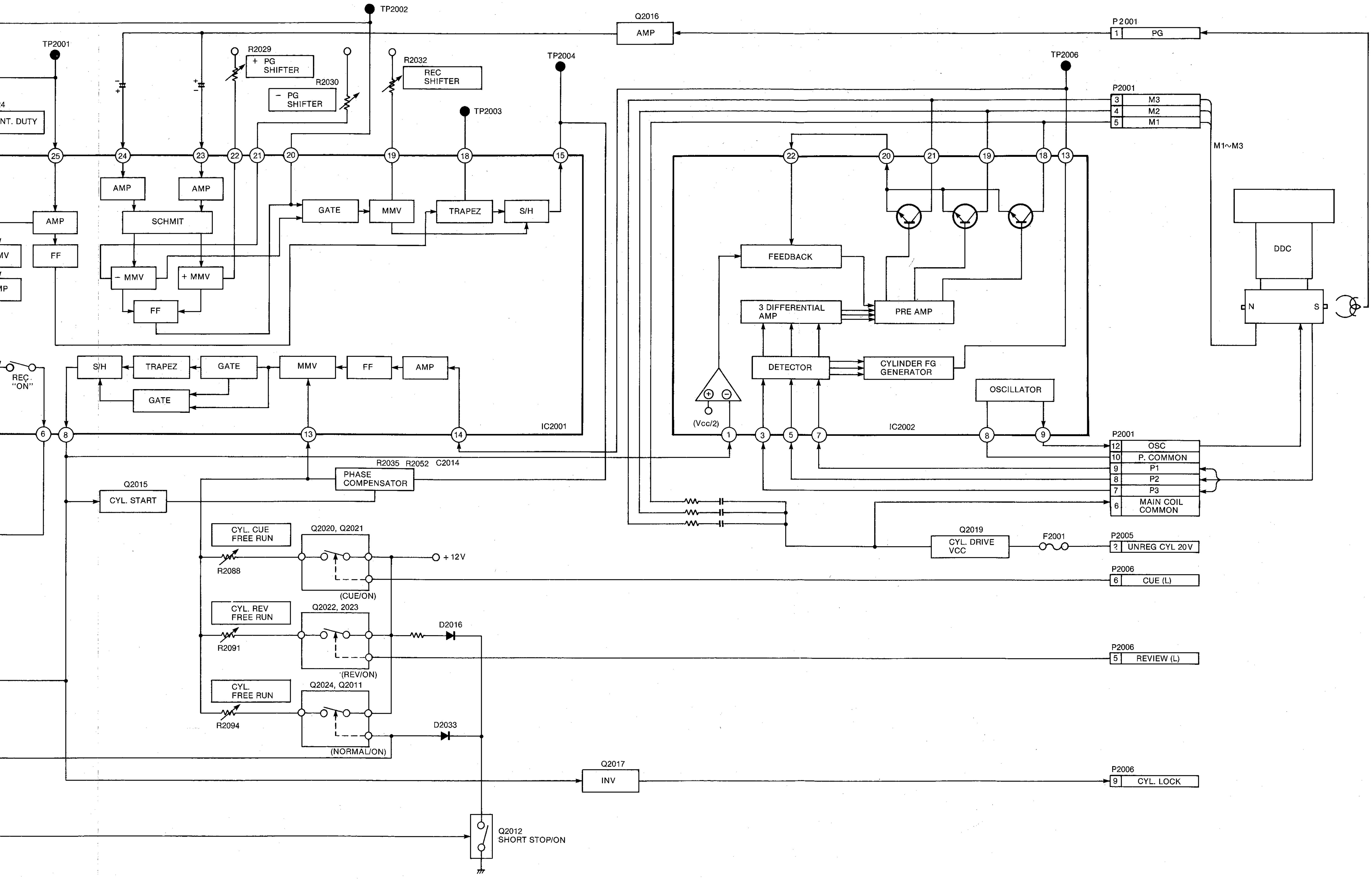

P3009
VIDEO IN (LINE IN) 1
P3004
VIDEO IN (TUNER IN) 3
LINE
TUNER
P.B RF IN
IC3002 (10)
AMP
Q8005
FL8001
B.P.F
FL8002
L.P.F
REC
P.B
ACC
DET
BURST GATE
B.M
IC8001
AMP
REC
P.B
P.B
REC
TP8001
FL8003
B.P.F
FL8004
L.P.F
AMP
IC8001
COMB BAL
R8021
DL8001
2H DELAY
Q8004
AMP
Q8003
FS1 PULSE GENERATOR
Q8001, D8001, D8002
REC LEVEL
R8030
D8003
R8007
P.B LEVEL
FL8005
B.P.F
TP8008
D8004
TP8003
Q8007
BUFFER
Q8006
BUFFER
C8050
X8002
PHASE DET
4.43MHz VXO
REC
P.B
B.M
90° DELAY
KILLER PHASE COMP
KILLER AMP
IC8004
TP8002
4.43MHz X-OSC
1/184640 [REC]
1/177344 [P.B]
IC8002
X8001
R8053, R8054
C8042, C8043
L.P.F
TP8007
Q8008
BAND PASS AMP
Q8009
BAND PASS AMP
D8005, TH8001
CLAMP
D8007, C8069
PEAK DETECTOR
IC8005
DIFF AMP
Q8010, Q8011
INVERTER
R8077
REC KILLER
TP8009
DELAY
C8039~C8041
L8009
FSI
AMP
PHASE CONTROL
H-D GATE
1/40 DIVIDER
M.M
PHASE COMP
2.50MHz VCO
1/4 DIVIDER
PHASE SELECT
DOC GATE
VIDEO IN
FROM TP3014
L8006, C8020,
C8021, R8038
L.P.F
WHITE CLIP
SYNC SEP
R8043, C8028
L.P.F
TO SERVO CIRCUIT
VSS OUT
TP8005
R8050
AFC

CESS BLOCK DIAGRAM

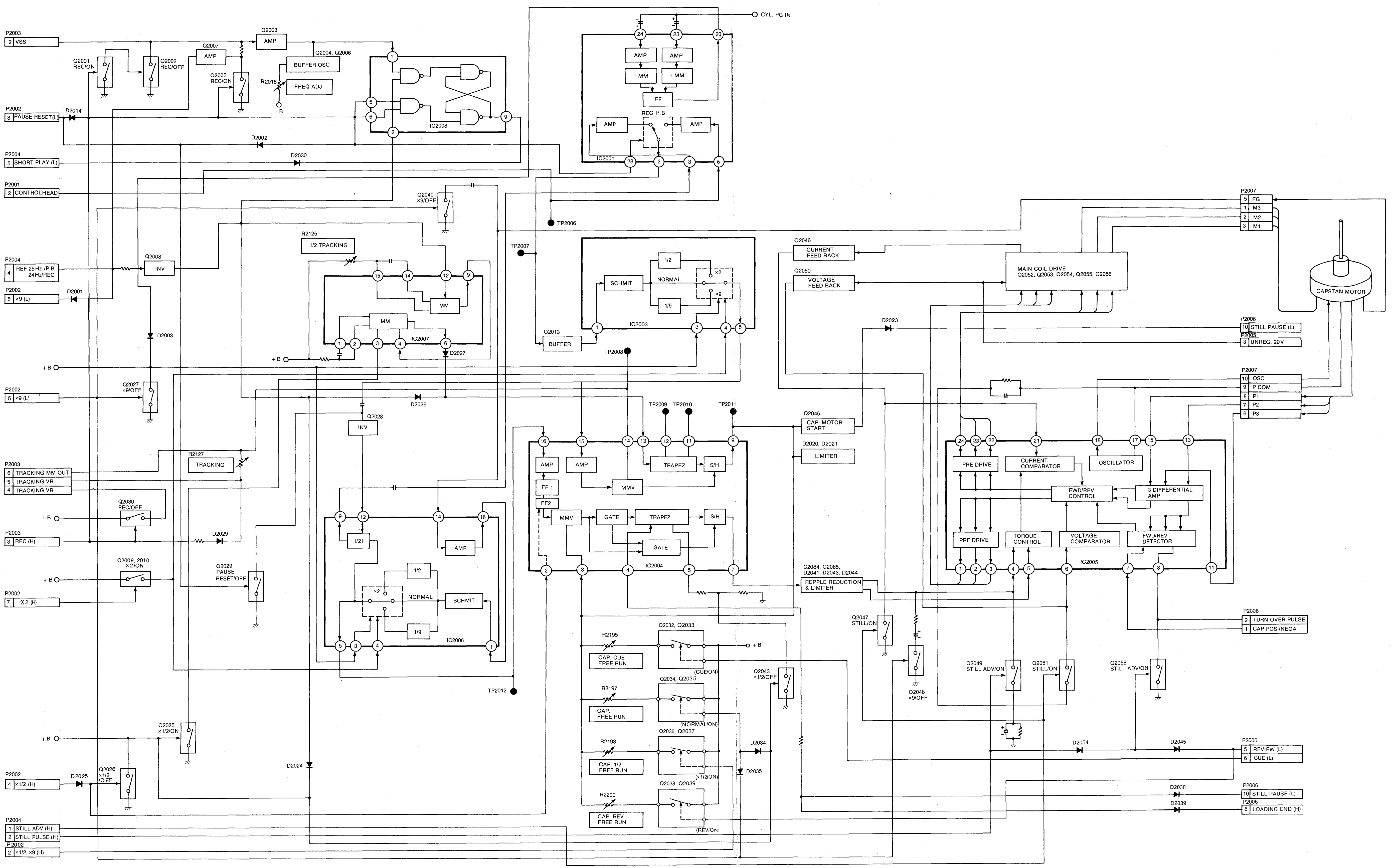

COMB BAL
R8021
FL8001
B.P.F
IC8001
REC
ACC
B.M
FL8002
L.P.F
P.B
DET
AMP
REC
P.B
BURST GATE
P.B
REC
FL8003
B.P.F
AMP
IC8001
FL8004
L.P.F
DL8001
2H DELAY
Q8004
AMP
Q8003
FS1 PULSE GENERATOR
Q8001, D8001, D8002
PG 25Hz IN FROM SERVO SECTION
REC LEVEL
R8030
REC CHROMA OUT TO Q3005 (E)
TP8001
D8003
P.B CHROMA OUT TO IC3004 (29)
FL8005
B.P.F
TP8008
R8007
P.B LEVEL
C8050
X8002
D8004
TP8003
P3001
4 REC 12V IN
Q8006
BUFFER
Q8007
BUFFER
ACK TO SWITCHING CIRCUIT (LUMINANCE)
PHASE DET
4.43 MHz VXO
REC
P.B
B.M
90° DELAY
KILLER PHASE COMP
KILLER AMP
IC8004
TP8002
4.43 MHz X-OSC
1/184640 [REC]
1/177344 [P.B]
IC8002
TO SERVO CIRCUIT 25Hz REF SIGN OUT
X8001
PG 25Hz IN FROM SERVO SECTION
IC3004 (5) DOC IN
Q8008
BAND PASS AMP
Q8009
BAND PASS AMP
D8005, TH8001
CLAMP
D8007, C8069
PEAK DETECTOR
IC8005
DIFF AMP
Q8010, Q8011
INVERTER
TP8007
R8053, R8054 C8042, C8043
L.P.F
R8077
REC KILLER
DELAY
C8039~C8041 L8009
TP8009
FSI
AMP
DOC
PHASE CONTROL
H-D GATE
1/40 DIVIDER
M.M
L8006, C8020, C8021, R8038
L.P.F
WHITE CLIP
SYNC SEP
DOC GATE
PHASE COMP
2.50 MHz VCO
1/4 DIVIDER
PHASE SELECT
AMP
IC8003
R8043, C8028
L.P.F
TP8005
R8050
AFC

CYLINDER SERVO BLOCK DIAGRAM

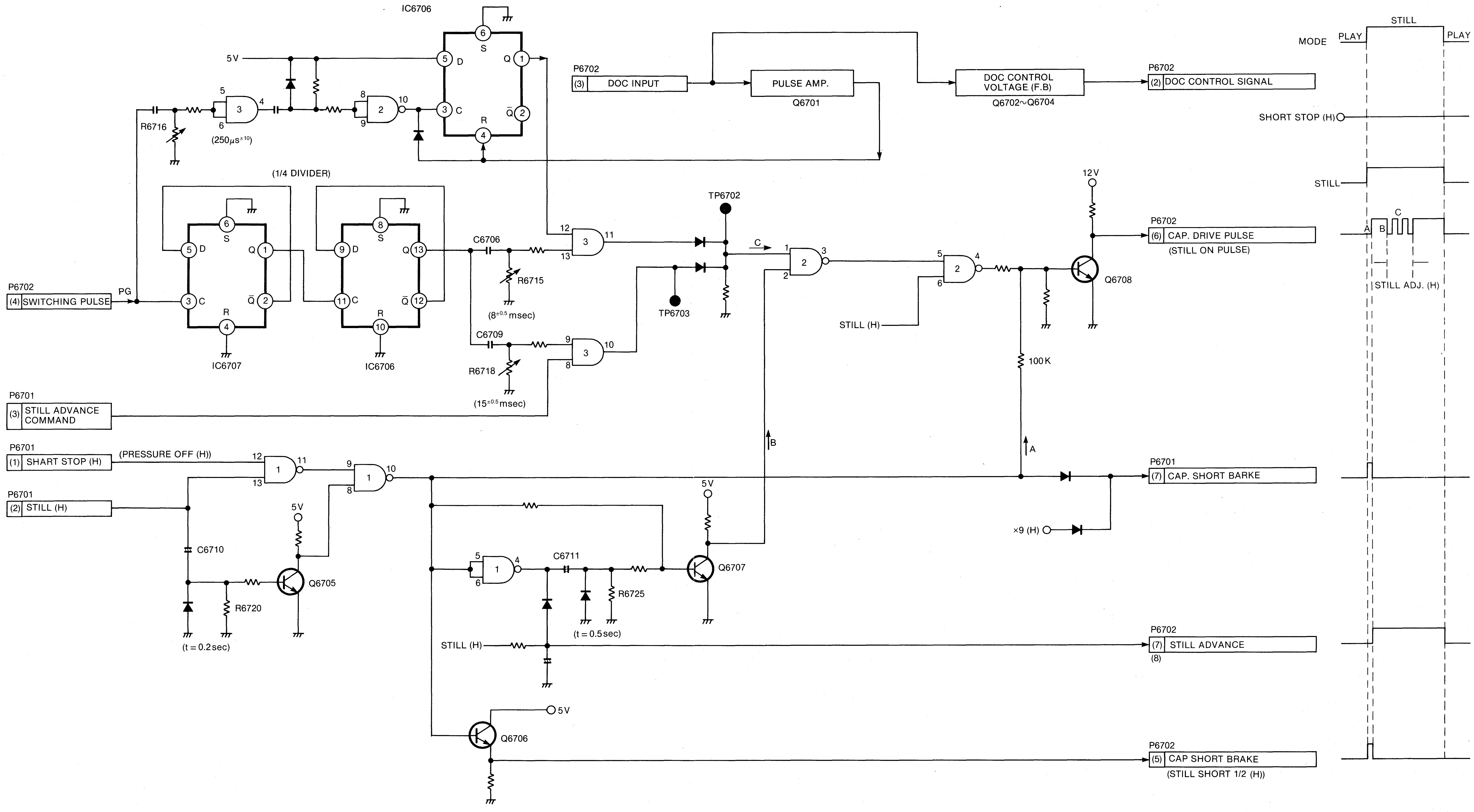

P2003
1 25Hz PG
TP2002
Q2016
AMP
P2003
2 VSS
Q2003
AMP
TP2001
R2029
+ PG SHIFTER
R2032
REC SHIFTER
TP2004
R2030
− PG SHIFTER
TP2003
+B
R2024
CONT. DUTY
Q2004
Q2006
BUFFER OSC
+B
Q2002
P.B/ON
R2016
FREQ ADJ
+B
P2003
3 REC (H)
Q2001
REC/ON
P2004
4 REF 25Hz
Q2007
AMP
27
25
24
23
22
21
20
19
18
15
AMP
AMP
AMP
SCHMIT
GATE
MMV
TRAPEZ
S/H
MMV
FF
AMP
− MMV
+ MMV
FF
D2001
Q2005
REC/ON
S/H
TRAPEZ
GATE
MMV
FF
AMP
GATE
REC "ON"
P2002
8 PAUSE RESET (L)
D2014
+B
6
8
13
14
IC2001
Q2018
×9/ON
P2002
5 ×9 (L)
Q2027
×9/OFF
R2035 R2052 C2014
PHASE COMPENSATOR
Q2015
CYL. START
P2001
2 CONTROL HEAD
TP2005
CYL. CUE FREE RUN
Q2020, Q2021
R2088
+12V
(CUE/ON)
CYL. REV FREE RUN
Q2022, 2023
R2091
D2016
(REV/ON)
CYL. FREE RUN
Q2024, Q2011
R2094
D2033
(NORMAL/ON)
D2008
Q2017
INV
P2002
3 SHORT STOP (H)
Q2012
SHORT STOP/ON
22
20
21
FEEDBACK
3 DIFFERENTIAL AMP
PRE AMP
DETECTOR
CYLINDER FG GENERATOR
(Vcc/2)
1
3
5
7
IC2002


TP2002
Q2016
AMP
P2001
1 PG
TP2001
R2029
+ PG SHIFTER
R2030
− PG SHIFTER
R2032
REC SHIFTER
TP2004
TP2003
TP2006
NT. DUTY
P2001
3 M3
4 M2
5 M1
M1~M3
25
24
23
22
21
20
19
18
15
22
20
21
19
18
13
AMP
AMP
AMP
SCHMIT
GATE
MMV
TRAPEZ
S/H
FF
− MMV
+ MMV
FF
FEEDBACK
3 DIFFERENTIAL AMP
PRE AMP
DETECTOR
CYLINDER FG GENERATOR
OSCILLATOR
DDC
N
S
REC. "ON"
S/H
TRAPEZ
GATE
MMV
FF
AMP
GATE
(Vcc/2)
6
8
13
14
IC2001
1
3
5
7
IC2002
8
9
P2001
12 OSC
10 P. COMMON
9 P1
8 P2
7 P3
6 MAIN COIL COMMON
R2035 R2052 C2014
PHASE COMPENSATOR
Q2015
CYL. START
Q2019
CYL. DRIVE VCC
F2001
P2005
2 UNREG CYL 20V
CYL. CUE FREE RUN
Q2020, Q2021
R2088
+12V
(CUE/ON)
P2006
6 CUE (L)
CYL. REV FREE RUN
Q2022, 2023
D2016
R2091
(REV/ON)
P2006
5 REVIEW (L)
CYL. FREE RUN
Q2024, Q2011
R2094
D2033
(NORMAL/ON)
Q2017
INV
P2006
9 CYL. LOCK
Q2012
SHORT STOP/ON

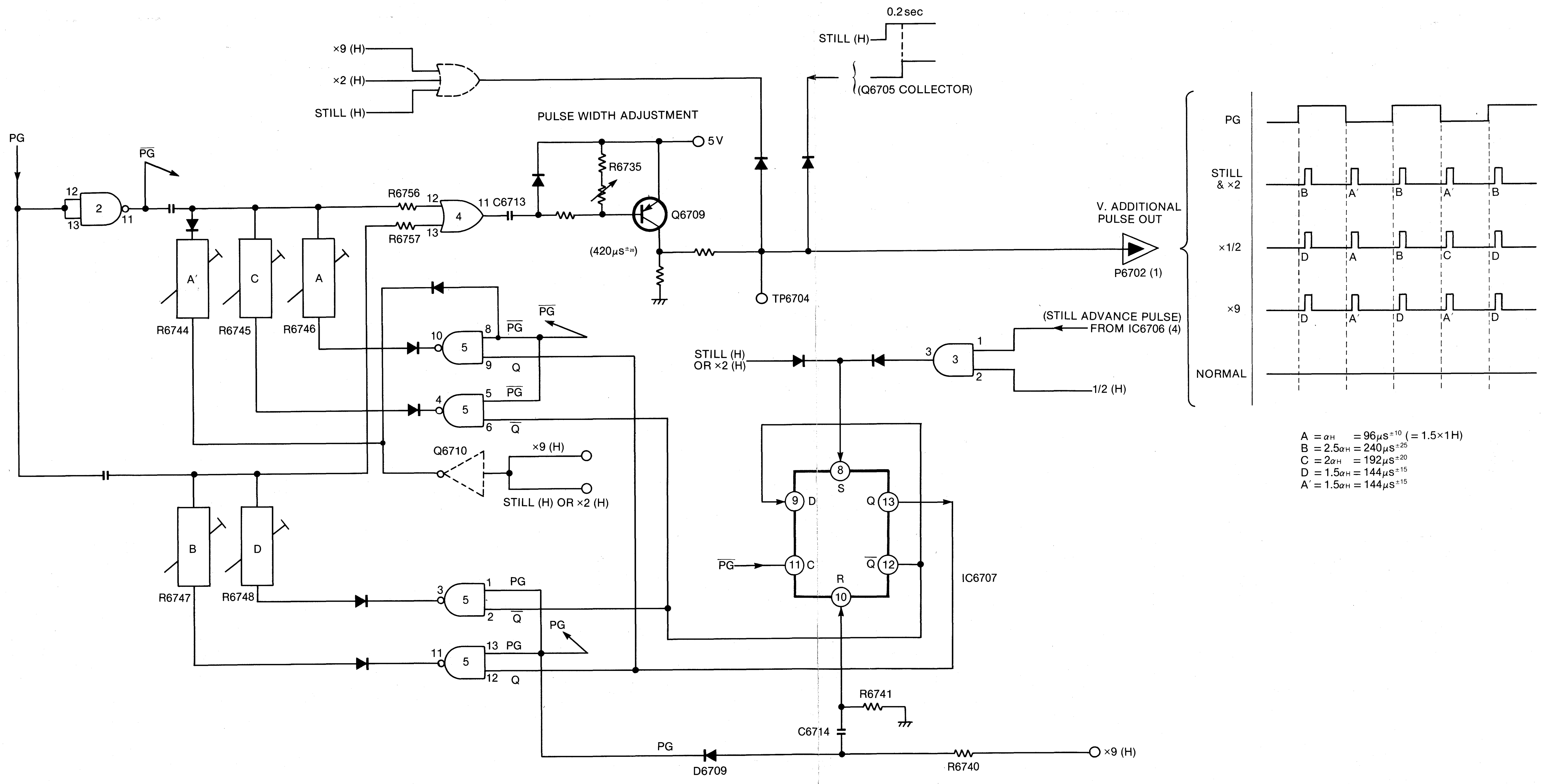
CAPSTAN SERVO BLOCK DIAGRAM


P2003
2 VSS
Q2001 REC/ON
Q2002 REC/OFF
Q2007
AMP
Q2003
AMP
Q2004, Q2006
BUFFER OSC
Q2005 REC/ON
R2016
FREQ ADJ
+B
IC2008
P2002
8 PAUSE RESET(L)
D2014
D2002
D2030
P2004
5 SHORT PLAY (L)
P2001
2 CONTROLHEAD
CYL. PG IN
AMP
-MM
+MM
FF
REC P.B
IC2001
Q2040 ×9/OFF
TP2006
TP2007
R2125
1/2 TRACKING
MM
IC2007
D2027
Q2008
INV
P2004
4 REF 25Hz /P.B 24Hz/REC
P2002
5 ×9 (L)
D2001
D2003
+B
P2002
5 ×9 (L)
Q2027 ×9/OFF
D2026
Q2028
INV
SCHMIT
NORMAL
1/2
1/9
×2
×9
IC2003
Q2013
BUFFER
TP2008
TP2009
TP2010
TP2011
AMP
FF 1
FF2
MMV
TRAPEZ
S/H
GATE
IC2004
P2003
6 TRACKING MM OUT
5 TRACKING VR
4 TRACKING VR
R2127
TRACKING
Q2030 REC/OFF
+B
P2003
3 REC (H)
D2029
Q2009, 2010 ×2/ON
+B
Q2029 PAUSE RESET/OFF
P2002
7 X2 (H)
1/21
AMP
SCHMIT
IC2006
TP2012
+B
Q2025 ×1/2/ON
D2024
P2002
4 ×1/2 (H)
D2025
Q2026 ×1/2 /OFF
P2004
1 STILL ADV (H)
2 STILL PULSE (H)
P2002
2 ×1/2, ×9 (H)
R2195
CAP. CUE FREE RUN
Q2032, Q2033
(CUE/ON)
R2197
CAP. FREE RUN
Q2034, Q2035
(NORMAL/ON)
R2198
CAP. 1/2 FREE RUN
Q2036, Q2037
(×1/2/ON)
R2200
CAP. REV FREE RUN
Q2038, Q2039
(REV/ON)
Q2043 ×1/2/OFF
D2034
D2035
Q2046
CURRENT FEED BACK
Q2050
VOLTAGE FEED BACK
Q2045
CAP. MOTOR START
D2020, D2021
LIMITER
C2084, C2085, D2041, D2043, D2044
REPPLE REDUCTION & LIMITER
Q2047 STILL/ON
Q2048 ×9/OFF
D2023
MAIN COIL DRIVE Q2052, Q2053, Q2054, Q2055, Q2056
P2007
5 FG
1 M3
2 M2
3 M1
CAPSTAN MOTOR
P2006
10 STILL PAUSE (L)
P2005
3 UNREG. 20V
P2007
10 OSC
9 P COM
8 P1
7 P2
6 P3
PRE DRIVE
CURRENT COMPARATOR
OSCILLATOR
FWD/REV CONTROL
3 DIFFERENTIAL AMP
PRE DRIVE
TORQUE CONTROL
VOLTAGE COMPARATOR
FWD/REV DETECTOR
IC2005
P2006
2 TURN OVER PULSE
1 CAP POSI/NEGA
Q2049 STILL ADV/ON
Q2051 STILL/ON
Q2058 STILL ADV/ON
D2054
D2045
P2006
5 REVIEW (L)
6 CUE (L)
D2038
D2039
P2006
10 STILL PAUSE (L)
P2006
8 LOADING END (H)

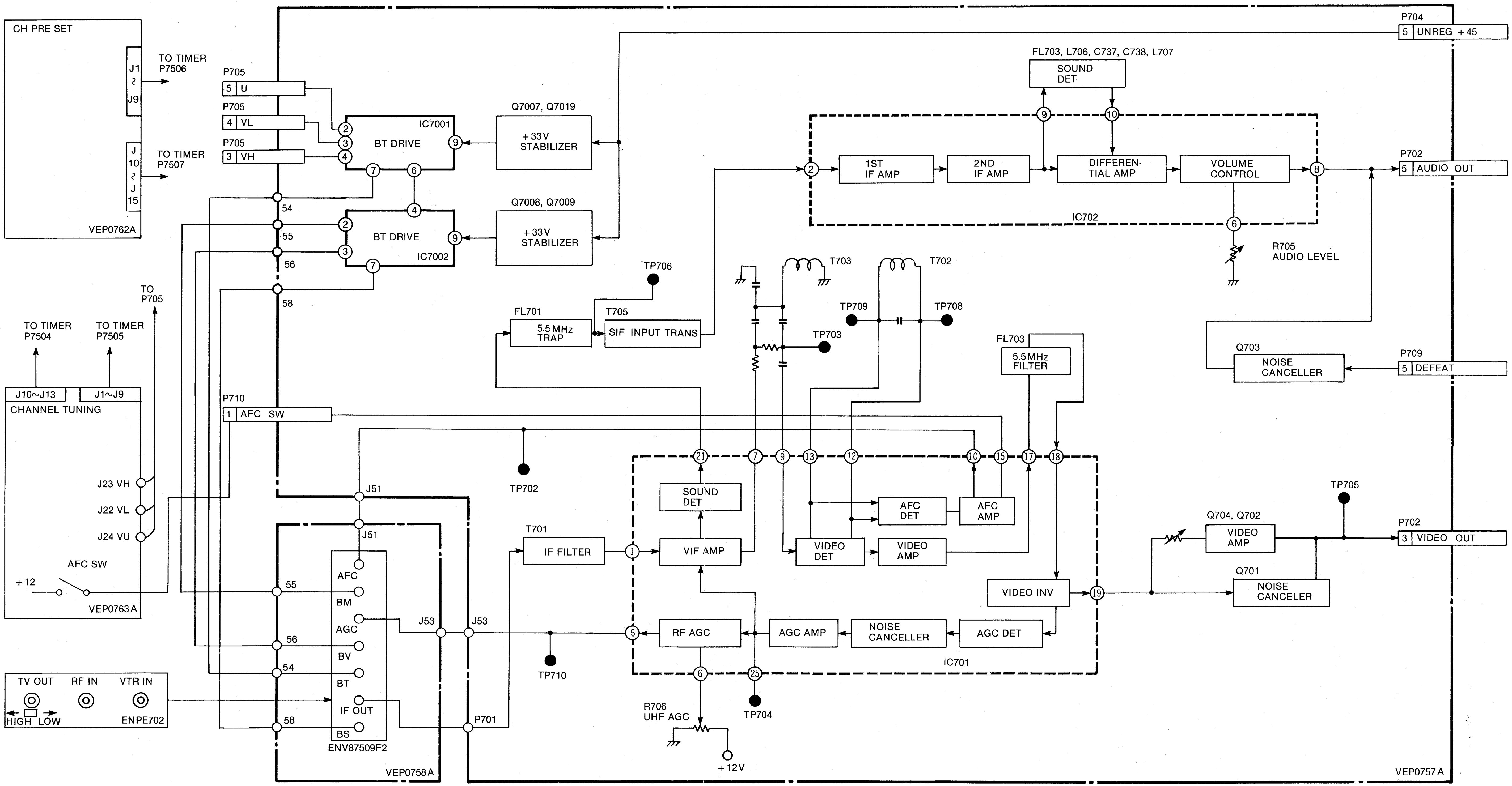
STILL CIRCUIT BLOCK DIAGRAM *Still Advance*


IC6706
5V
R6716
(250μs±10)
(1/4 DIVIDER)
P6702
(3) DOC INPUT
PULSE AMP.
Q6701
DOC CONTROL VOLTAGE (F.B)
Q6702~Q6704
P6702
(2) DOC CONTROL SIGNAL
MODE
PLAY
STILL
PLAY
SHORT STOP (H)
STILL
12V
TP6702
C6706
R6715
(8±0.5 msec)
C6709
R6718
(15±0.5 msec)
TP6703
C
STILL (H)
P6702
(6) CAP. DRIVE PULSE
(STILL ON PULSE)
Q6708
A B C
STILL ADJ. (H)
100K
P6702
(4) SWITCHING PULSE
PG
IC6707
IC6706
P6701
(3) STILL ADVANCE COMMAND
P6701
(1) SHART STOP (H)
(PRESSURE OFF (H))
P6701
(2) STILL (H)
B
A
5V
P6701
(7) CAP. SHORT BARKE
×9 (H)
C6710
Q6705
R6720
(t=0.2sec)
5V
C6711
R6725
(t=0.5sec)
Q6707
STILL (H)
P6702
(7) STILL ADVANCE
(8)
5V
Q6706
P6702
(5) CAP SHORT BRAKE
(STILL SHORT 1/2 (H))

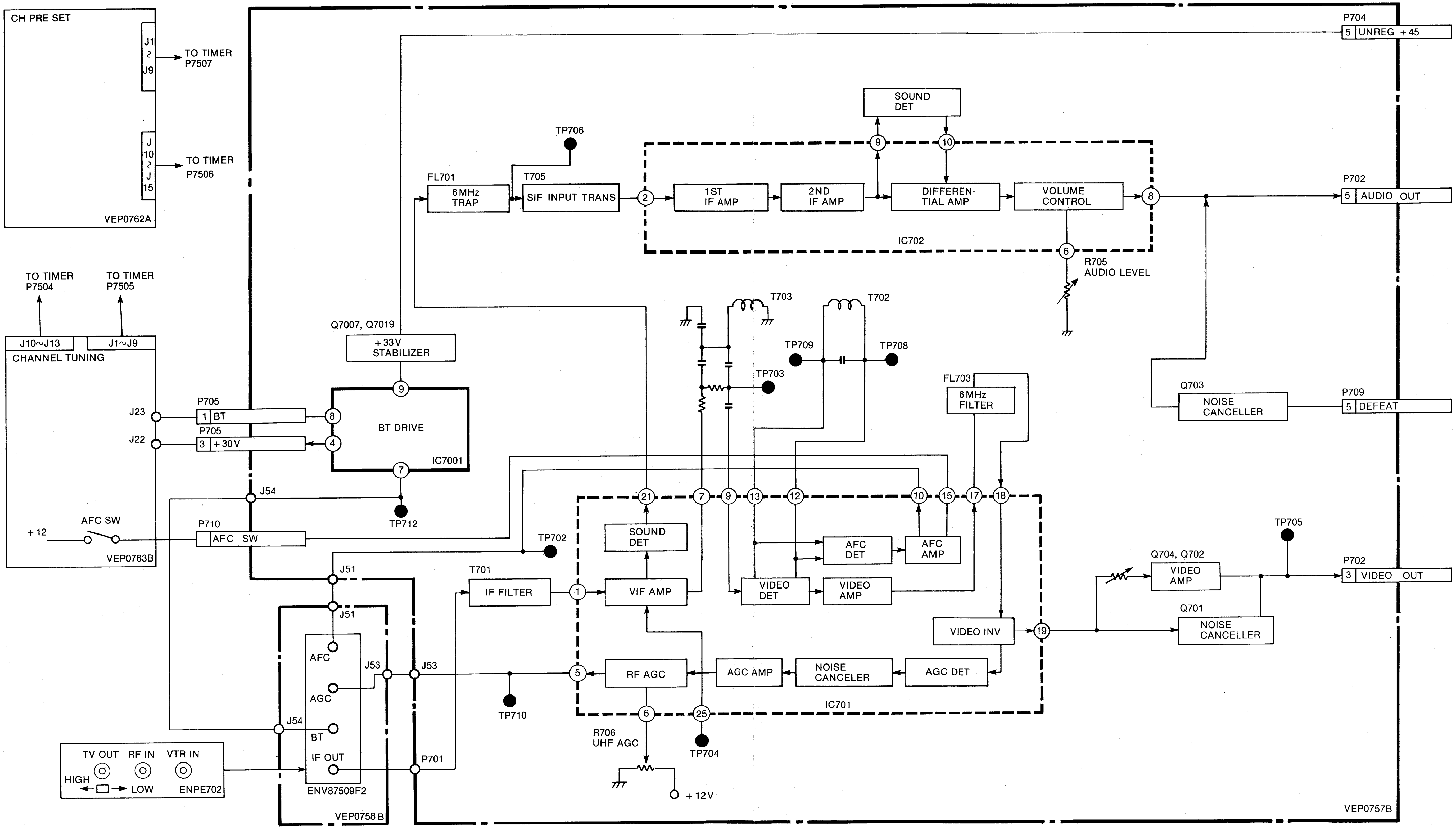
STILL CIRCUIT BLOCK DIAGRAM *Artificial Pulse Generator*


0.2 sec
STILL (H)
(Q6705 COLLECTOR)
×9 (H)
×2 (H)
STILL (H)
PULSE WIDTH ADJUSTMENT
5V
R6735
PG
PG
12
13
2
11
R6756
R6757
12
13
4
11 C6713
Q6709
(420μs±20)
TP6704
V. ADDITIONAL PULSE OUT
P6702 (1)
A′
C
A
R6744
R6745
R6746
10
8
PG
PG
5
9
Q
4
5
PG
5
6
Q
Q6710
×9 (H)
STILL (H) OR ×2 (H)
B
D
R6747
R6748
3
1
PG
5
2
Q
PG
11
13
PG
5
12
Q
STILL (H) OR ×2 (H)
(STILL ADVANCE PULSE) FROM IC6706 (4)
3
1
3
2
1/2 (H)
8
S
9
D
Q
13
PG
11
C
Q
12
R
10
IC6707
R6741
C6714
PG
D6709
R6740
×9 (H)
PG
STILL & ×2
B
A′
B
A′
B
×1/2
D
A
B
C
D
×9
D
A′
D
A′
D
NORMAL
A = αH = 96μs±10 (= 1.5×1H)
B = 2.5αH = 240μs±25
C = 2αH = 192μs±20
D = 1.5αH = 144μs±15
A′ = 1.5αH = 144μs±15

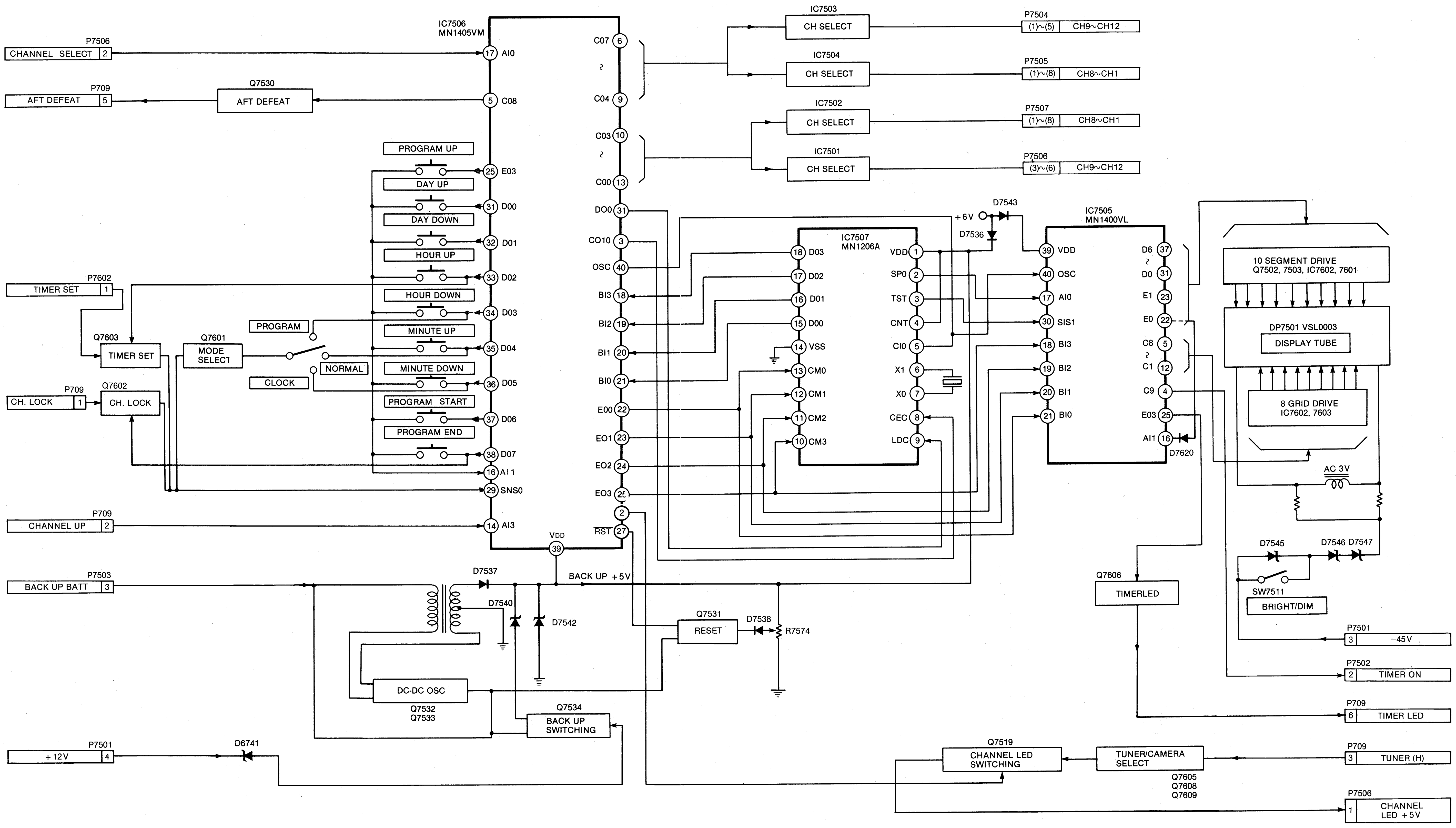
TV DEMODULATOR BLOCK DIAGRAM *FOR NV-7000E*


CH PRE SET
J1
J9
TO TIMER P7506
J10
J15
TO TIMER P7507
VEP0762A
P705
5 U
P705
4 VL
P705
3 VH
IC7001
BT DRIVE
Q7007, Q7019
+33V STABILIZER
BT DRIVE
IC7002
Q7008, Q7009
+33V STABILIZER
54
55
56
58
P704
5 UNREG +45
FL703, L706, C737, C738, L707
SOUND DET
1ST IF AMP
2ND IF AMP
DIFFEREN-TIAL AMP
VOLUME CONTROL
IC702
P702
5 AUDIO OUT
R705 AUDIO LEVEL
TP706
FL701
5.5 MHz TRAP
T705
SIF INPUT TRANS
T703
T702
TP709
TP708
TP703
FL703
5.5MHz FILTER
Q703
NOISE CANCELLER
P709
5 DEFEAT
TO P705
TO TIMER P7504
TO TIMER P7505
J10~J13
J1~J9
CHANNEL TUNING
P710
1 AFC SW
J23 VH
J22 VL
J24 VU
AFC SW
+12
VEP0763A
TP702
J51
J51
T701
IF FILTER
SOUND DET
VIF AMP
AFC DET
AFC AMP
VIDEO DET
VIDEO AMP
VIDEO INV
RF AGC
AGC AMP
NOISE CANCELLER
AGC DET
IC701
TP705
Q704, Q702
VIDEO AMP
P702
3 VIDEO OUT
Q701
NOISE CANCELER
AFC
BM
AGC
BV
BT
IF OUT
BS
ENV87509F2
J53
J53
TP710
P701
TV OUT
RF IN
VTR IN
HIGH
LOW
ENPE702
VEP0758A
R706 UHF AGC
TP704
+12V
VEP0757A

TV DEMODULATOR BLOCK DIAGRAM *FOR NV-7000B*

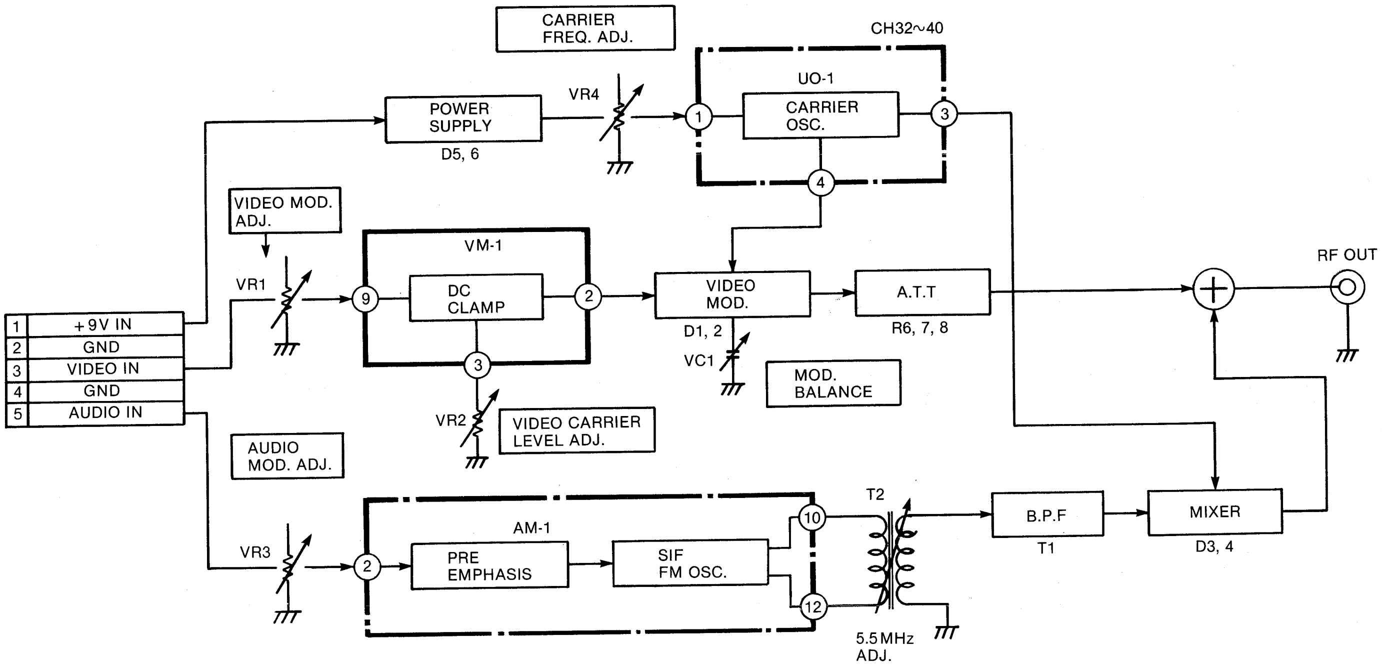

CH PRE SET
J1 ~ J9
TO TIMER P7507
J10 ~ J15
TO TIMER P7506
VEP0762A
TO TIMER P7504
TO TIMER P7505
J10~J13
J1~J9
CHANNEL TUNING
J23
J22
AFC SW
+12
VEP0763B
P705
1 BT
P705
3 +30V
P710
AFC SW
Q7007, Q7019
+33V STABILIZER
9
8
4
BT DRIVE
7
IC7001
J54
TP712
TP702
J51
J51
AFC
AGC
J53
J53
J54
BT
IF OUT
ENV87509F2
VEP0758 B
TV OUT
RF IN
VTR IN
HIGH
LOW
ENPE702
P701
FL701
6MHz TRAP
T705
SIF INPUT TRANS
TP706
2
1ST IF AMP
2ND IF AMP
SOUND DET
9
10
DIFFEREN-TIAL AMP
VOLUME CONTROL
8
IC702
6
R705 AUDIO LEVEL
P704
5 UNREG +45
P702
5 AUDIO OUT
T703
T702
TP709
TP708
TP703
FL703
6MHz FILTER
Q703
NOISE CANCELLER
P709
5 DEFEAT
21
7
9
13
12
10
15
17
18
SOUND DET
AFC DET
AFC AMP
T701
IF FILTER
1
VIF AMP
VIDEO DET
VIDEO AMP
VIDEO INV
19
5
RF AGC
AGC AMP
NOISE CANCELER
AGC DET
IC701
6
25
TP710
R706 UHF AGC
TP704
+12V
TP705
Q704, Q702
VIDEO AMP
Q701
NOISE CANCELLER
P702
3 VIDEO OUT
VEP0757B

PROGRAMMABLE TIMER BLOCK DIAGRAM



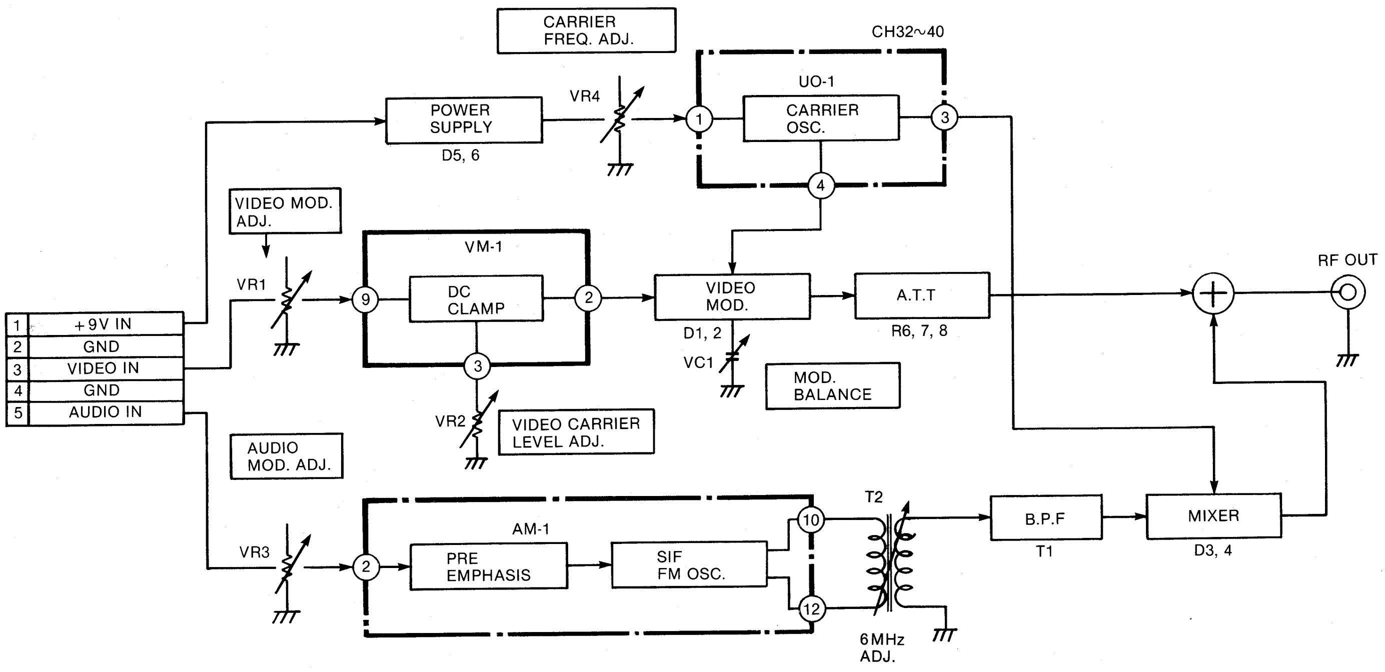
IC7506
MN1405VM
P7506
CHANNEL SELECT 2
17 AI0
P709
AFT DEFEAT 5
Q7530
AFT DEFEAT
5 C08
PROGRAM UP
25 E03
DAY UP
31 D00
DAY DOWN
32 D01
HOUR UP
33 D02
HOUR DOWN
34 D03
MINUTE UP
35 D04
MINUTE DOWN
36 D05
PROGRAM START
37 D06
PROGRAM END
38 D07
16 AI1
29 SNS0
P7602
TIMER SET 1
Q7603
TIMER SET
Q7601
MODE SELECT
PROGRAM
NORMAL
CLOCK
P709
CH. LOCK 1
Q7602
CH. LOCK
P709
CHANNEL UP 2
14 AI3
VDD
39
C07 6
C04 9
C03 10
C00 13
DO0 31
CO10 3
OSC 40
BI3 18
BI2 19
BI1 20
BI0 21
E00 22
EO1 23
EO2 24
EO3 25
2
RST 27
IC7503
CH SELECT
IC7504
CH SELECT
IC7502
CH SELECT
IC7501
CH SELECT
P7504
(1)~(5) CH9~CH12
P7505
(1)~(8) CH8~CH1
P7507
(1)~(8) CH8~CH1
P7506
(3)~(6) CH9~CH12
IC7507
MN1206A
18 D03
17 D02
16 D01
15 D00
14 VSS
13 CM0
12 CM1
11 CM2
10 CM3
VDD 1
SP0 2
TST 3
CNT 4
CI0 5
X1 6
X0 7
CEC 8
LDC 9
D7543
+6V
D7536
IC7505
MN1400VL
39 VDD
40 OSC
17 AI0
30 SIS1
18 BI3
19 BI2
20 BI1
21 BI0
D6 37
D0 31
E1 23
E0 22
C8 5
C1 12
C9 4
E03 25
AI1 16
D7620
10 SEGMENT DRIVE
Q7502, 7503, IC7602, 7601
DP7501 VSL0003
DISPLAY TUBE
8 GRID DRIVE
IC7602, 7603
AC 3V
D7545
D7546
D7547
SW7511
BRIGHT/DIM
Q7606
TIMERLED
P7501
3 -45V
P7502
2 TIMER ON
P709
6 TIMER LED
P7503
BACK UP BATT 3
D7537
BACK UP +5V
D7540
D7542
Q7531
RESET
D7538
R7574
DC-DC OSC
Q7532
Q7533
Q7534
BACK UP SWITCHING
P7501
+12V 4
D6741
Q7519
CHANNEL LED SWITCHING
TUNER/CAMERA SELECT
Q7605
Q7608
Q7609
P709
3 TUNER (H)
P7506
1 CHANNEL LED +5V

RF CONVERTER BLOCK DIAGRAM *ENC17351 (NV-7000E)*



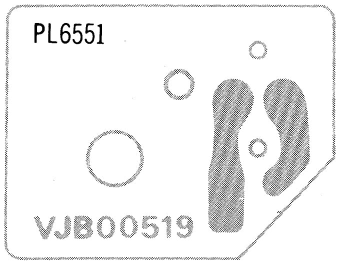
CARRIER FREQ. ADJ.
CH32~40
UO-1
CARRIER OSC.
POWER SUPPLY
D5, 6
VR4
VIDEO MOD. ADJ.
VM-1
DC CLAMP
VR1
VIDEO MOD.
D1, 2
VC1
A.T.T
R6, 7, 8
MOD. BALANCE
RF OUT
1 +9V IN
2 GND
3 VIDEO IN
4 GND
5 AUDIO IN
VR2
VIDEO CARRIER LEVEL ADJ.
AUDIO MOD. ADJ.
AM-1
PRE EMPHASIS
SIF FM OSC.
VR3
T2
5.5MHz ADJ.
B.P.F
T1
MIXER
D3, 4

ENC17352 (NV-7000B)

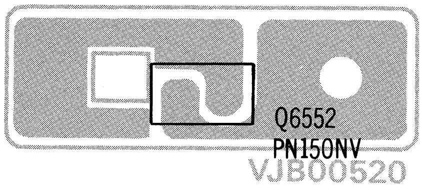


CARRIER FREQ. ADJ.
CH32~40
UO-1
CARRIER OSC.
POWER SUPPLY
D5, 6
VR4
VIDEO MOD. ADJ.
VM-1
DC CLAMP
VR1
VIDEO MOD.
D1, 2
VC1
A.T.T
R6, 7, 8
MOD. BALANCE
RF OUT
1 +9V IN
2 GND
3 VIDEO IN
4 GND
5 AUDIO IN
VR2
VIDEO CARRIER LEVEL ADJ.
AUDIO MOD. ADJ.
AM-1
PRE EMPHASIS
SIF FM OSC.
VR3
T2
6MHz ADJ.
B.P.F
T1
MIXER
D3, 4

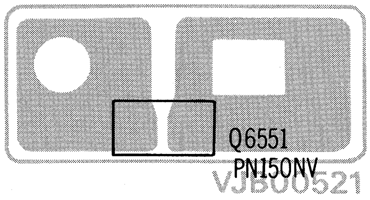
SENSOR LAMP C.B. (VJB00519)


PL6551
VJB00519

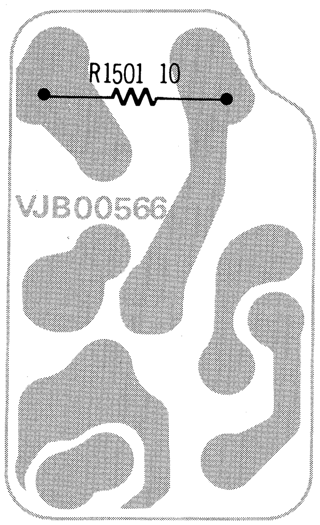
TAKEUP PHOTO TR C.B. (VJB00520)


Q6552
PN150NV
VJB00520

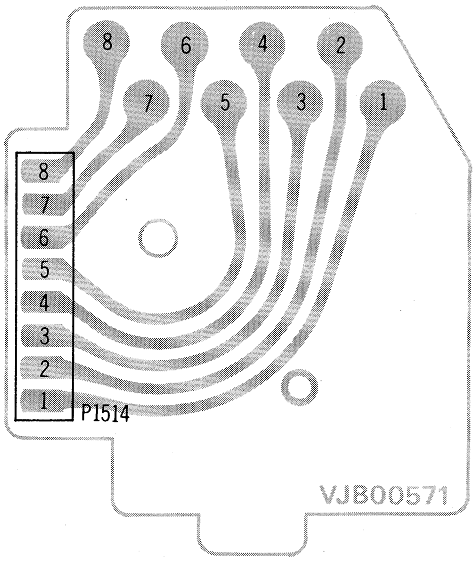
SUPPLY PHOTO TR C.B. (VJB00521)


Q6551
PN150NV
VJB00521

A/C HEAD C.B. (VJB00566)

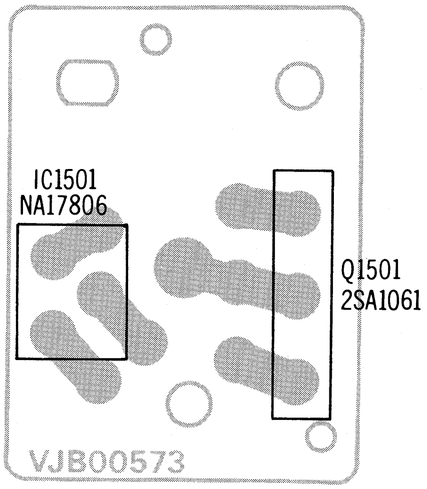

R1501 10
VJB00566

PRESSURE SOLENOID C.B. (VJB00571)

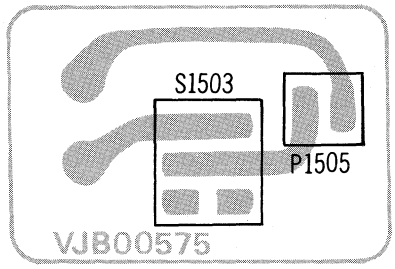

8
6
4
2
7
5
3
1
8
7
6
5
4
3
2
1
P1514
VJB00571

1	TAKE UP PHOTO TR
2	PRESSURE SOL A
3	PRESSURE SOL B
4	PRESSURE SOL C
5	LOADING Ⓜ NEGA
6	LOADING Ⓜ POSI
7	GND
8	DEW SENSOR

POWER TRANSISTOR C.B. (VJB00573)


IC1501
NA17806
Q1501
2SA1061
VJB00573

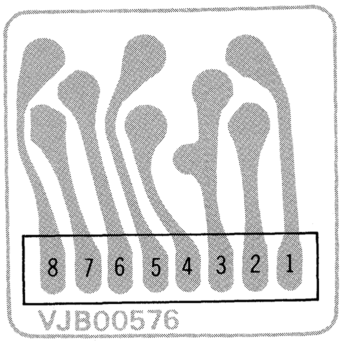
MEMORY SW C.B. (VJB00575)


S1503
P1505
VJB00575

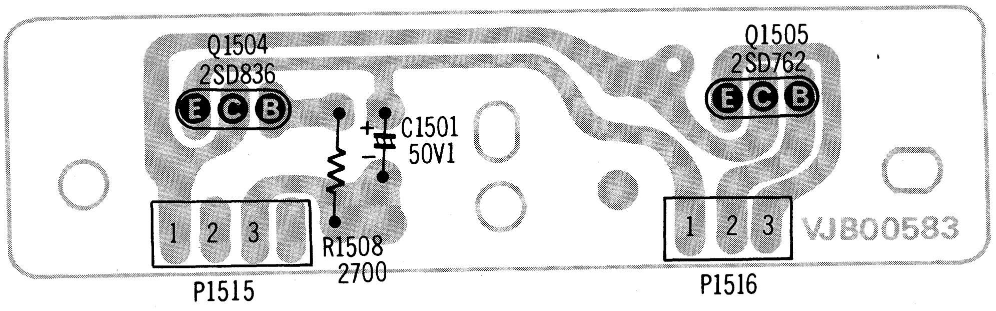
1	COUNTER
2	COUNTER

REMOTE CONTROL JACK C.B. (VJB00576)

1	MICON A3
2	MICON A0
3	MICON C1
4	MICON C2
5	MICON A2
6	MICON C3
7	MICON C0
8	MICON A1


8 7 6 5 4 3 2 1
VJB00576

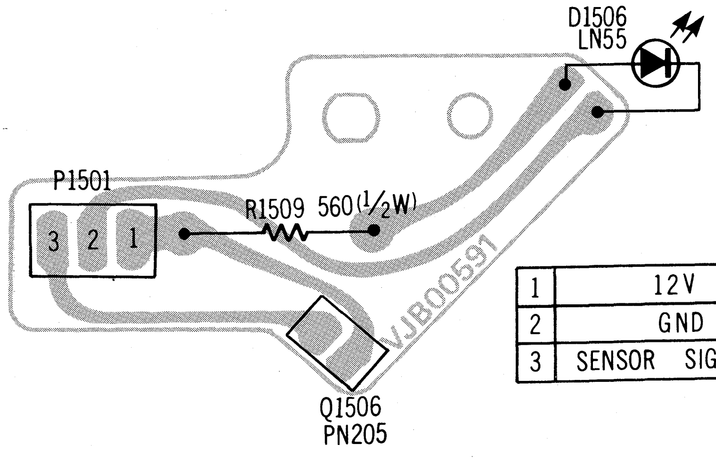
TRANSISTOR C.B. (VJB00583)


Q1504
2SD836
E C B
C1501
50V1
R1508
2700
1 2 3
P1515
Q1505
2SD762
E C B
1 2 3
VJB00583
P1516

1	UNREG 12V
2	LOADING Ⓜ CONT
3	GND

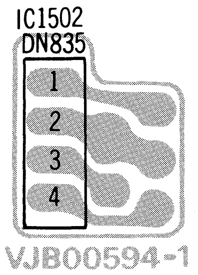
1	LOADING Ⓜ VOL
2	REEL Ⓜ B
3	REEL Ⓜ E

TAPE SLACK SENSOR C.B. (VJB00591)

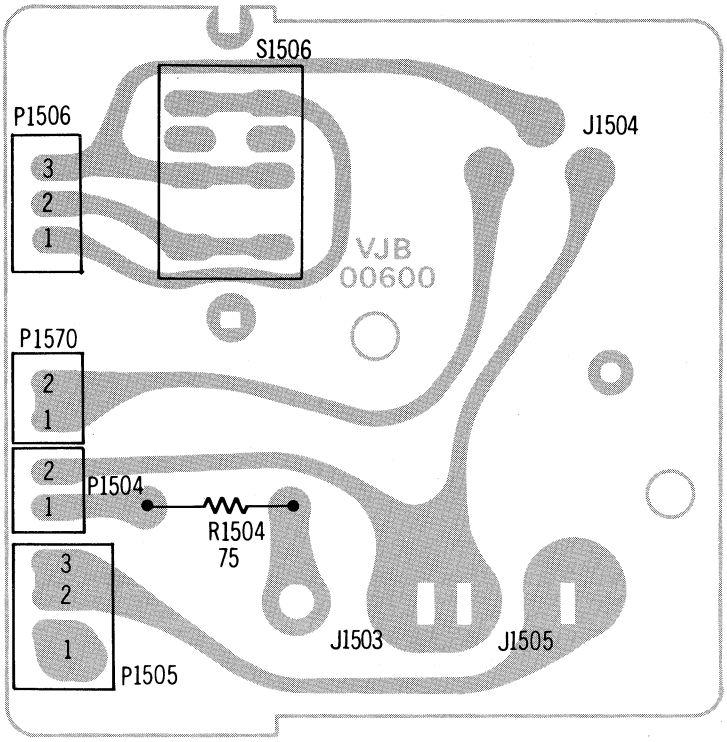

D1506
LN55
P1501
3 2 1
R1509 560(1/2W)
VJB00591
Q1506
PN205

1	12V
2	GND
3	SENSOR SIGNAL

REVIEW SENSOR (VJB00594)


IC1502
DN835
1
2
3
4
VJB00594-1

REAR JACK C.B. (VJB00600)


S1506
P1506
3
2
1
J1504
VJB
00600
P1570
2
1
2
1
P1504
R1504
75
3
2
1
J1503
J1505
P1505

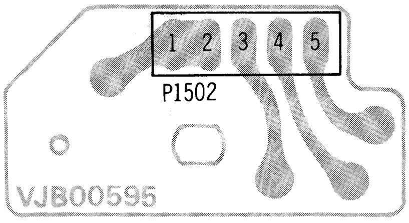
1	COLOR MODE ON
2	TEST
3	12 V

1	
2	5 V

1	VIDEO IN
2	GND

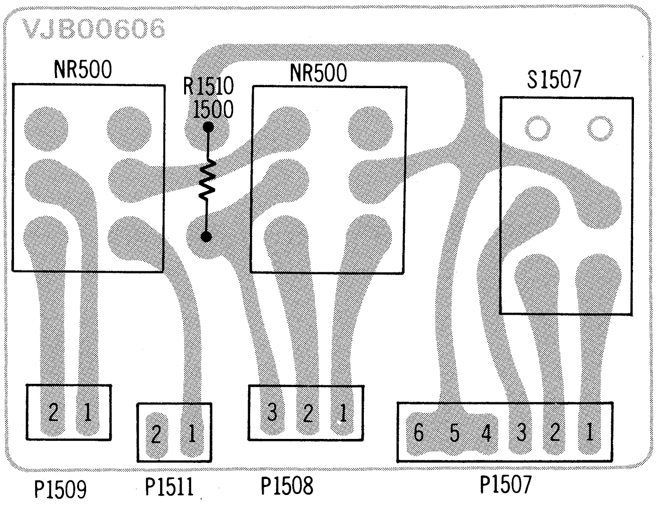
1	
2	
3	AUDIO LINE IN

REVIEW SENSOR CONNECTION C.B. (VJB00595)


1
2
3
4
5
P1502
VJB00595

1	
2	SENSOR OUT 1
3	12 V
4	SENSOR OUT 2
5	GND

POWER/TIMER/NR SELECT SW C.B. (VJB00606)


VJB00606
NR500
R1510
1500
NR500
S1507
2 1
2 1
3 2 1
6 5 4 3 2 1
P1509
P1511
P1508
P1507

P1509

1	NR SW
2	NR SW

P1511

1	NR LED
2	

P1508

1	TIMER SET
2	
3	

P1507

1	FROM POWER P.C.B.
2	FROM POWER P.C.B.
3	TO DEMODULATOR
4	TO TRANSPORT
5	
6	

P1001 (Power Supply C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Power TR (E)	Q1501-E Power TR
2	6V	IC1501 Power TR
3	GND	IC1501 Power TR
4	Unreg. 12V	IC1501 Power TR
5	Power TR (C)	Q1501-C Power TR
6	Power TR (B)	Q1501-B Power TR

P1002 (Power Supply C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	To Power SW	P1507-2 Power, Timer NR, Select SW
2	Unreg. +45V	— —
3	AC 38V	— —
4	Unreg. −45V	— —
5	Unreg. −45V	P7501-3 Timer
6	(F) 12V	P704-1 TV Demodulator
7	(F) 12V	— —
8	—	— —

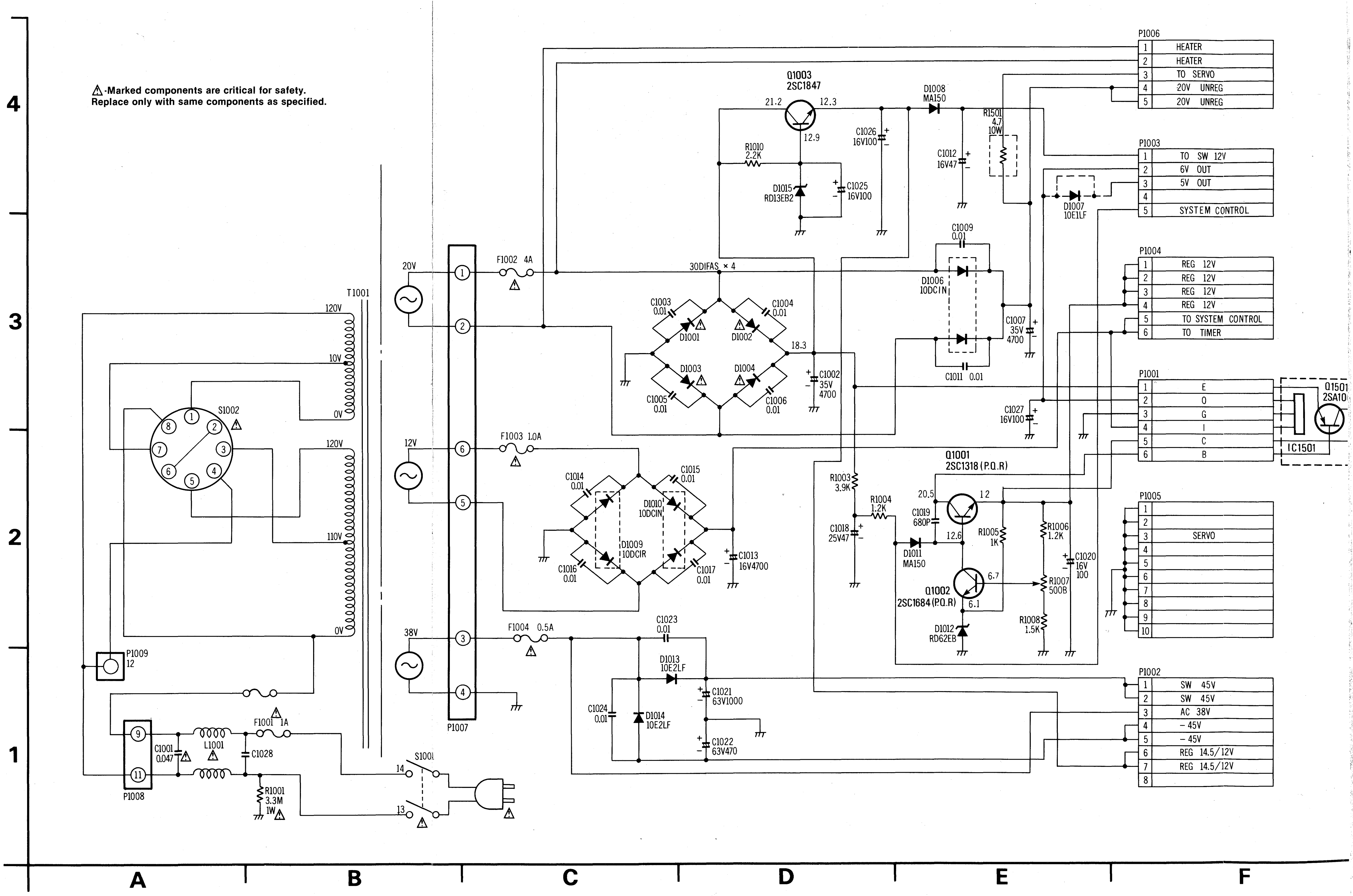
P1003 (Power Supply C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	To Power SW	P1507-1 Power, Timer NR, Select SW
2	6V	P7501-5 Timer
3	5V	P6001-1 System Control I
4	5V	P1510-2 Rear Jack
5	Timer (L)	P6001-2 System Control I

P1004 (Power Supply C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	12V	P3007-2 Luminance & Chrominance
2	12V	P2005-1 Control & Sub System Control
3	12V	P6203-2 System Control II
4	12V	P704-2 TV Demodulator
5	Unreg. 12V	P1515-1 TR
6	Unreg. 12V	P7501-4 Timer

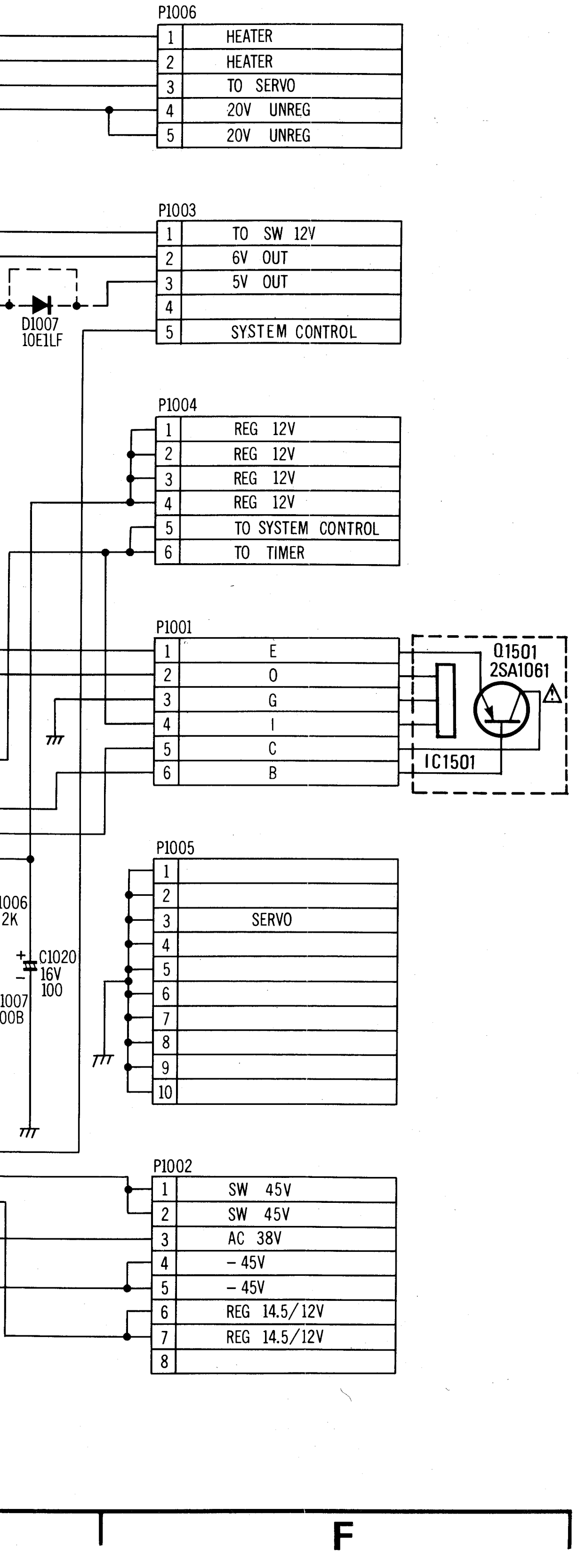
P1005 (Power Supply C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	GND	P3007-1 Luminance & Chrominance
2	GND	P2005-4 Control & Sub System Control
3	GND	P2005-5 Control & Sub System Control
4	GND	P6001-4 System Control I
5	GND	P6203-4 System Control II
6	GND	P704-3 TV Demodulator
7	GND	P7501-1 Timer
8	GND	— —
9	—	— —
10	—	— —

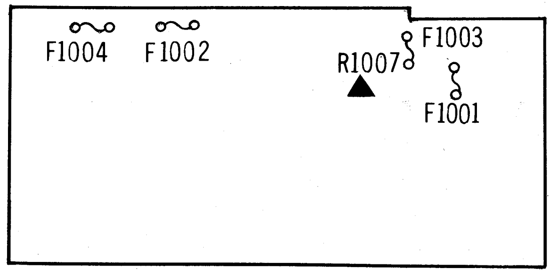
P1006 (Power Supply C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	AC 17V	P3008-1 Luminance & Chrominance
2	AC 17V	P3008-2 Luminance & Chrominance
3	Unreg. 20V (4.7)	P2005-2 Control & Sub System Control
4	Unreg. 20V	P2005-3 Control & Sub System Control
5	Unreg. 20V	P6203-1 System Control II

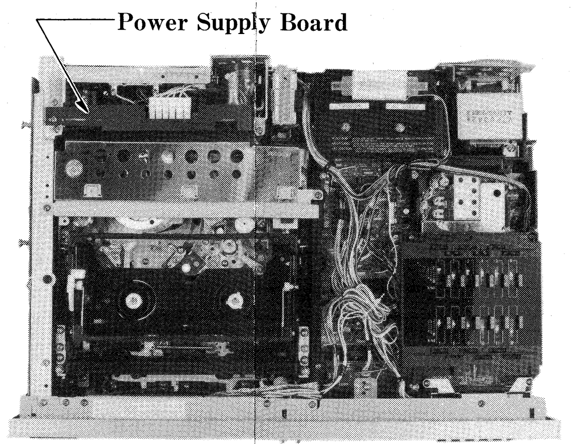
POWER SUPPLY SCHEMATIC DIAGRAM


⚠-Marked components are critical for safety.
Replace only with same components as specified.

4
3
2
1
A
B
C
D
E
F
T1001
120V
10V
0V
120V
110V
0V
S1002
P1009
12
P1008
9
11
C1001
0.047
L1001
C1028
F1001 1A
R1001
3.3M
1W
S1001
14
13
20V
12V
38V
P1007
F1002 4A
F1003 1.0A
F1004 0.5A
30DIFAS × 4
C1003
0.01
C1004
0.01
D1001
D1002
D1003
D1004
C1005
0.01
C1006
0.01
18.3
C1002
35V
4700
C1014
0.01
C1015
0.01
D1010
10DCIN
D1009
10DCIR
C1016
0.01
C1017
0.01
C1013
16V4700
C1023
0.01
D1013
10E2LF
C1024
0.01
D1014
10E2LF
C1021
63V1000
C1022
63V470
Q1003
2SC1847
21.2
12.3
12.9
R1010
2.2K
D1015
RD13EB2
C1025
16V100
C1026
16V100
D1008
MA150
C1012
16V47
R1501
4.7
10W
C1009
0.01
D1006
10DCIN
C1011 0.01
C1007
35V
4700
D1007
10E1LF
C1027
16V100
Q1001
2SC1318 (P.Q.R)
R1003
3.9K
R1004
1.2K
C1018
25V47
C1019
680P
20.5
12
12.6
D1011
MA150
R1005
1K
R1006
1.2K
C1020
16V
100
Q1002
2SC1684 (P.Q.R)
6.7
6.1
R1007
500B
D1012
RD62EB
R1008
1.5K
P1006
HEATER
HEATER
TO SERVO
20V UNREG
20V UNREG
P1003
TO SW 12V
6V OUT
5V OUT
SYSTEM CONTROL
P1004
REG 12V
REG 12V
REG 12V
REG 12V
TO SYSTEM CONTROL
TO TIMER
P1001
E
O
G
I
C
B
Q1501
IC1501
P1005
SERVO
P1002
SW 45V
SW 45V
AC 38V
− 45V
− 45V
REG 14.5/12V
REG 14.5/12V

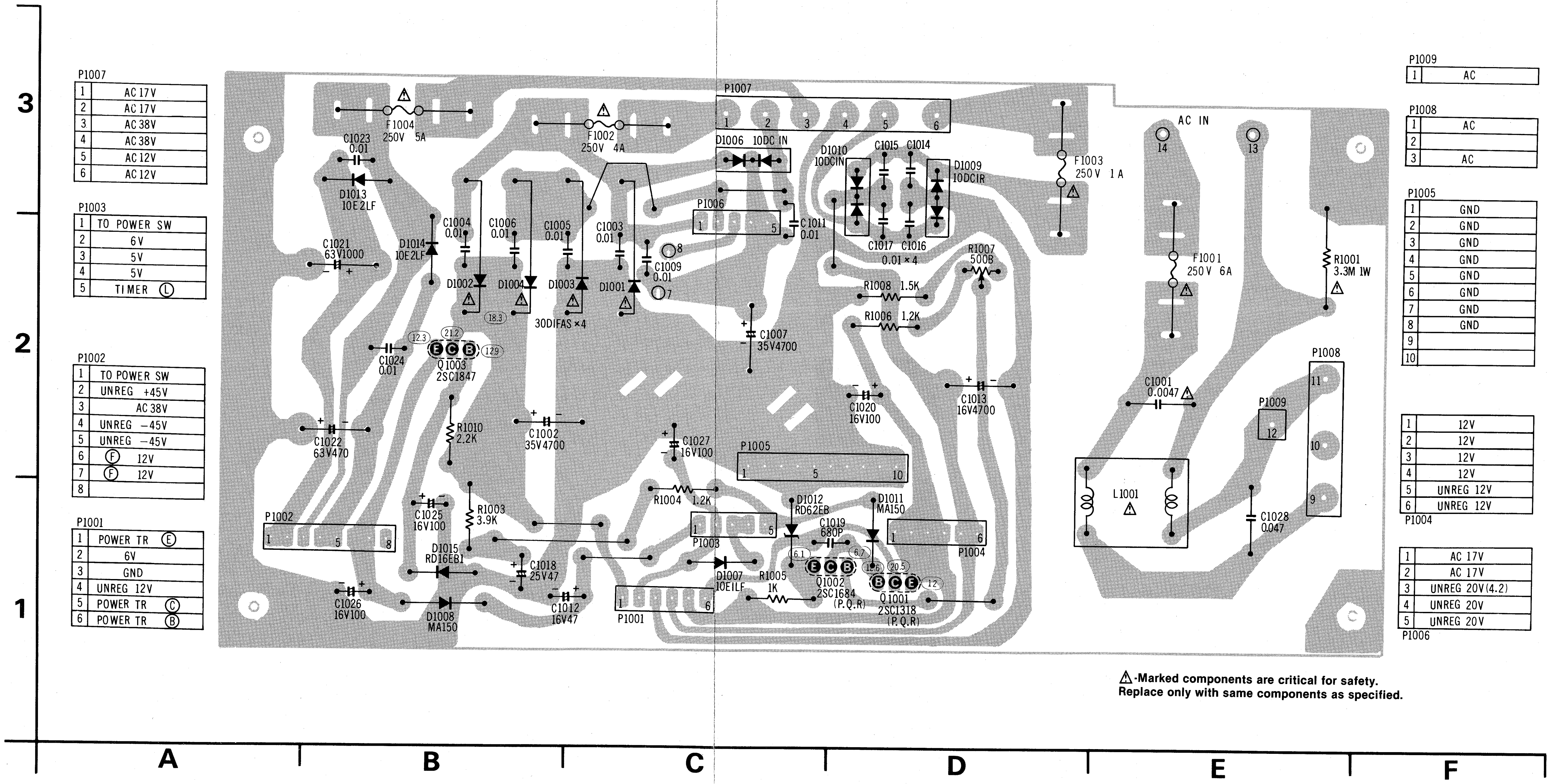

P1006
1 HEATER
2 HEATER
3 TO SERVO
4 20V UNREG
5 20V UNREG
P1003
1 TO SW 12V
2 6V OUT
3 5V OUT
4
5 SYSTEM CONTROL
D1007
10E1LF
P1004
1 REG 12V
2 REG 12V
3 REG 12V
4 REG 12V
5 TO SYSTEM CONTROL
6 TO TIMER
P1001
1 E
2 O
3 G
4 I
5 C
6 B
Q1501
2SA1061
IC1501
P1005
1
2
3 SERVO
4
5
6
7
8
9
10
C1020
16V
100
P1002
1 SW 45V
2 SW 45V
3 AC 38V
4 – 45V
5 – 45V
6 REG 14.5/12V
7 REG 14.5/12V
8
F


F1004
F1002
R1007
F1003
F1001


Power Supply Board

Power C.B.A.	
Q1001	D-1
Q1002	C-1
Q1003	B-2

POWER SUPPLY CIRCUIT BOARD (VEP0177A)


3
2
1
A
B
C
D
E
F
P1007
1 AC 17V
2 AC 17V
3 AC 38V
4 AC 38V
5 AC 12V
6 AC 12V
P1003
1 TO POWER SW
2 6V
3 5V
4 5V
5 TIMER Ⓛ
P1002
1 TO POWER SW
2 UNREG +45V
3 AC 38V
4 UNREG –45V
5 UNREG –45V
6 Ⓕ 12V
7 Ⓕ 12V
8
P1001
1 POWER TR Ⓔ
2 6V
3 GND
4 UNREG 12V
5 POWER TR Ⓒ
6 POWER TR Ⓑ
F1004
250V 5A
C1023
0.01
D1013
10E2LF
C1021
63V1000
D1014
10E2LF
C1004
0.01
C1006
0.01
C1005
0.01
C1003
0.01
F1002
250V 4A
D1002
D1004
D1003
D1001
30DIFAS×4
C1009
0.01
8
7
C1024
0.01
Q1003
2SC1847
12.3
21.2
12.9
18.3
C1022
63V470
R1010
2.2K
C1002
35V4700
C1027
16V100
C1025
16V100
R1003
3.9K
D1015
RD16EB1
C1018
25V47
C1026
16V100
D1008
MA150
C1012
16V47
P1002
1 5 8
P1001
1 6
P1007
1 2 3 4 5 6
D1006 10DC IN
D1010
10DCIN
C1015 C1014
D1009
10DCIR
P1006
1 5
C1011
0.01
C1017 C1016
0.01 × 4
R1007
500B
R1008 1.5K
R1006 1.2K
C1007
35V4700
C1020
16V100
C1013
16V4700
P1005
1 5 10
R1004 1.2K
P1003
1 5
D1012
RD62EB
C1019
680P
D1011
MA150
P1004
1 6
D1007
10E1LF
R1005
1K
6.1
6.7
12.6
20.5
12
Q1002
2SC1684
(P.Q.R)
Q1001
2SC1318
(P.Q.R)
F1003
250V 1A
AC IN
14
13
F1001
250V 6A
R1001
3.3M 1W
C1001
0.0047
P1009
12
P1008
11
10
9
L1001
C1028
0.047
P1009
1 AC
P1008
1 AC
2
3 AC
P1005
1 GND
2 GND
3 GND
4 GND
5 GND
6 GND
7 GND
8 GND
9
10
P1004
1 12V
2 12V
3 12V
4 12V
5 UNREG 12V
6 UNREG 12V
P1006
1 AC 17V
2 AC 17V
3 UNREG 20V(4.2)
4 UNREG 20V
5 UNREG 20V

⚠-Marked components are critical for safety.
Replace only with same components as specified.

SERVO & SUB-SYSTEM CONTROL SCHEMATIC DIAGRAM

P2002 (Control & Sub System Control C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	—	— —
2	1/2 ×9 (H)	P6005-2 System Control I
3	Pinch Sol OFF (H)	P6012-12 System Control
4	×1/2 (H)	P6404-2 Control & Sub System Control
5	×9 (L)	P6010-5 System Control I
6	×2 (H)	P6404-4 Control & Sub System Control
7	×2 (H)	P4009-4 Audio
8	Pause Reset (L)	P6202-2 System Control II

P2003 (Control & Sub System Control C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	PG SW	— Luminance & Chrominance
2	Vss	— Luminance & Chrominance
3	REC (H)	— Luminance & Chrominance
4	Tracking VR	— Luminance & Chrominance
5	Tracking VR	— Luminance & Chrominance
6	Tracking MM OUT	— Luminance & Chrominance

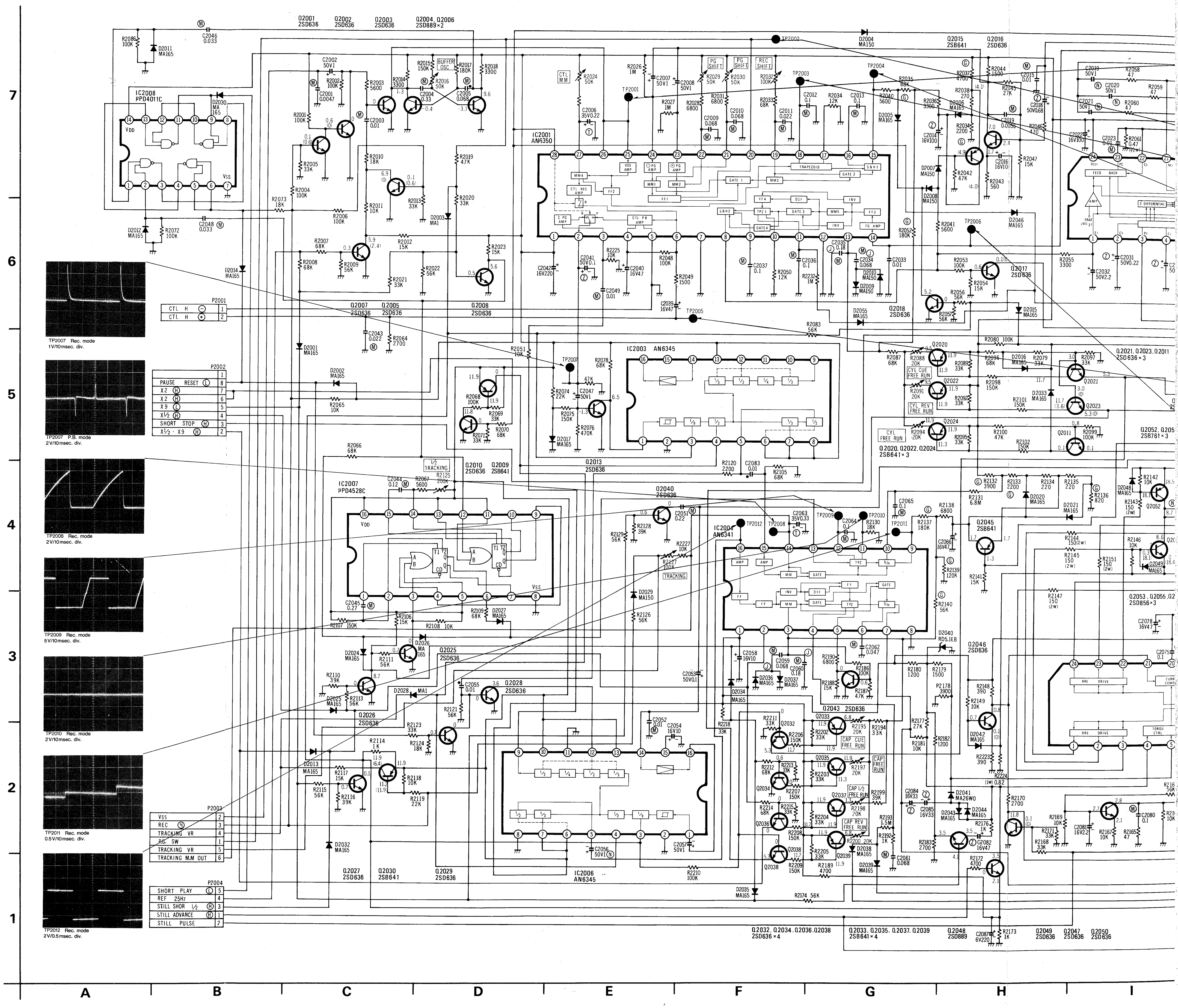
P2004 (Control & Sub System Control C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Still Advance (H)	— Luminance & Chrominance
2	Still Pulse	— Luminance & Chrominance
3	Still Short 1/2 (H)	— Luminance & Chrominance
4	REF 25 Hz	— Luminance & Chrominance
5	Pause Reset OUT	— Luminance & Chrominance

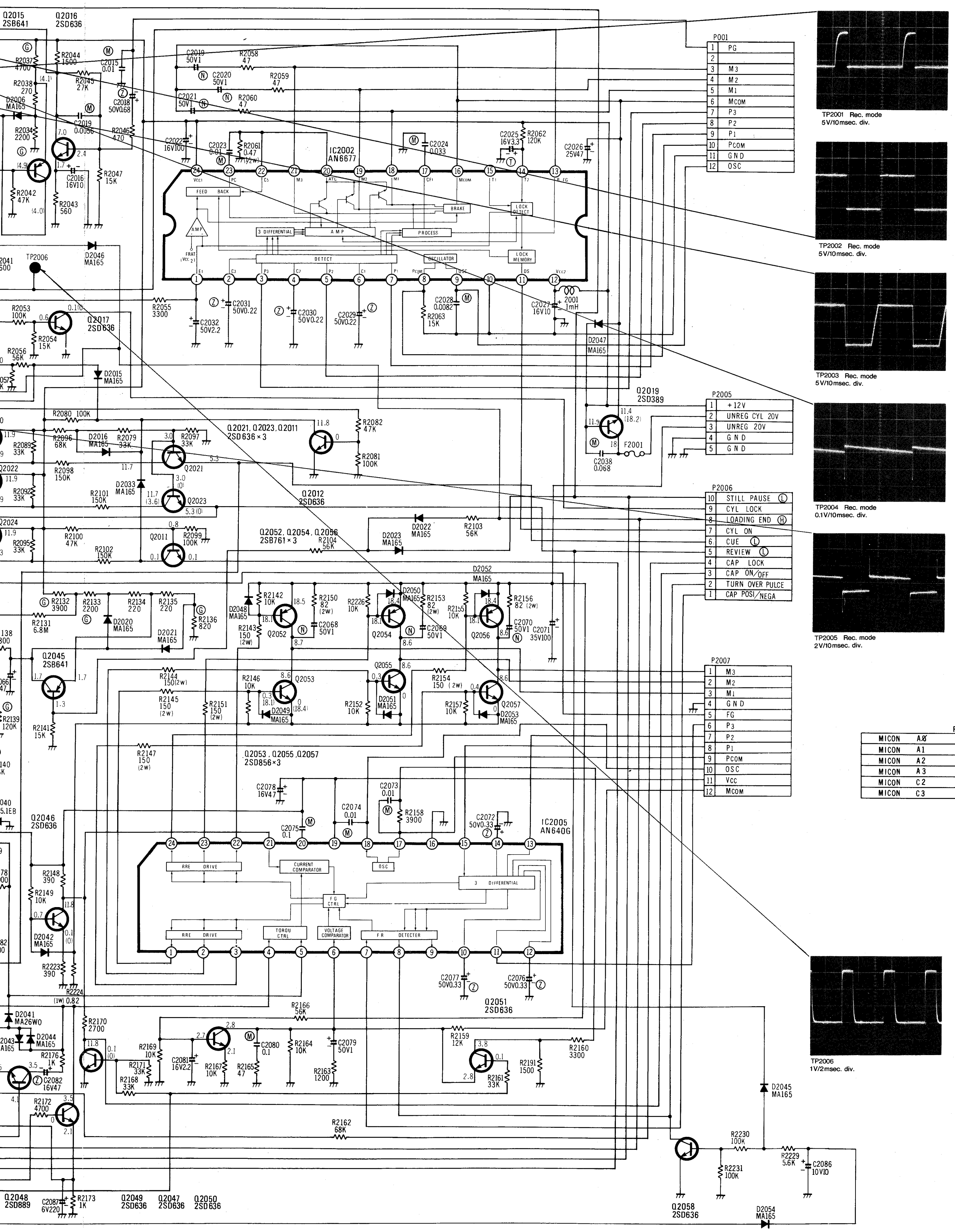
P2005 (Control & Sub System Control C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	12V	P1004-2 Power Supply
2	Unreg. 20V (4.7)	P1006-3 Power Supply
3	Unreg. 20V	P1006-4 Power Supply
4	GND	P1005-2 Power Supply
5	GND	P1005-3 Power Supply

P2006 (Control & Sub System Control C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	CAP. Posi/Nega	P6012-7 System Control I
2	Turn Over Pulse	P6012-8 System Control I
3	CAP. ON/OFF	P6012-9 System Control I
4	CAP. Lock	P6012-6 System Control I
5	Review (L)	P6012-4 System Control I
6	CUE (L)	P6012-3 System Control I
7	CYL. ON	P6012-1 System Control I
8	Loading End (H)	P6202-3 System Control II
9	CYL. Lock	P6012-2 System Control I
10	Pause (L)	P6202-1 System Control II

P2007 (Control & Sub System Control C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	M3	P007-7 CAP. D.D
2	M2	P006-2 CAP. D.D
3	M1	P007-1 CAP. D.D
4	GND	P006-5 CAP. D.D
5	F.G	P006-6 CAP. D.D
6	P3	P006-3 CAP. D.D
7	P2	P006-1 CAP. D.D
8	P1	P007-5 CAP. D.D
9	Pcom	P007-8 CAP. D.D
10	OSC	P007-2 CAP. D.D
11	Vcc	P007-6 CAP. D.D
12	Mcom	P007-3 CAP. D.D

P6401 (Control & Sub System Control C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Micon A0	P6504-1 Operation
2	Micon A1	P6504-2 Operation
3	Micon A2	P6504-3 Operation
4	Micon A3	P6504-4 Operation
5	Micon C2	P6504-5 Operation
6	Micon C3	P6504-6 Operation


TP2007 Rec. mode
1V/10msec. div.
TP2007 P.B. mode
2V/10msec. div.
TP2008 Rec. mode
2V/10msec. div.
TP2009 Rec. mode
5V/10msec. div.
TP2010 Rec. mode
2V/10msec. div.
TP2011 Rec. mode
0.5V/10msec. div.
TP2012 Rec. mode
2V/0.5msec. div.
IC2008 µPD4011C
IC2001 AN6350
IC2003 AN6345
IC2007 µPD4528C
IC2004 AN6341
IC2006 AN6345
P2001
CTL H
CTL H
P2002
PAUSE RESET Ⓛ
X2 Ⓗ
X2 Ⓗ
X9 Ⓛ
X½ Ⓗ
SHORT STOP Ⓗ
X½ · X9 Ⓗ
P2003
VSS
REC Ⓗ
TRACKING VR
PG SW
TRACKING VR
TRACKING MM OUT
P2004
SHORT PLAY Ⓛ
REF 25Hz
STILL SHOR Ⓗ
STILL ADVANCE Ⓗ
STILL PULSE
Q2001 2SD636
Q2002 2SD636
Q2003 2SD636
Q2004, Q2006 2SD889×2
Q2015 2SB641
Q2016 2SD636
Q2021, Q2023, Q2011 2SD636×3
Q2020, Q2022, Q2024 2SB641×3
Q2032, Q2034, Q2036, Q2038 2SD636×4
Q2033, Q2035, Q2037, Q2039 2SB641×4
Q2048 2SD889
Q2049 2SD636
Q2047 2SD636
Q2050 2SD636
TP2001
TP2002
TP2003
TP2004
TP2005
TP2006
TP2007
TP2008
TP2009
TP2010
TP2011
TP2012
CYL CUE FREE RUN
CYL REV FREE RUN
CYL FREE RUN
CAP CUE FREE RUN
CAP FREE RUN
CAP ½ FREE RUN
CAP REV FREE RUN
PG SHIFT
REC SHIFT
BUFFER OSC
½ TRACKING
TRACKING
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I


IC2002 AN6677
IC2005 AN6406
Q2015 2SB641
Q2016 2SD636
Q2017 2SD636
Q2019 2SD389
Q2021, Q2023, Q2011 2SD636×3
Q2012 2SD636
Q2052, Q2054, Q2056 2SB761×3
Q2053, Q2055, Q2057 2SD856×3
Q2045 2SB641
Q2046 2SD636
Q2051 2SD636
Q2058 2SD636
Q2048 2SD889
Q2049 2SD636
Q2047 2SD636
Q2050 2SD636
TP2006
P001
1 PG
2
3 M3
4 M2
5 M1
6 MCOM
7 P3
8 P2
9 P1
10 PCOM
11 GND
12 OSC
P2005
1 +12V
2 UNREG CYL 20V
3 UNREG 20V
4 GND
5 GND
P2006
10 STILL PAUSE Ⓛ
9 CYL LOCK
8 LOADING END Ⓗ
7 CYL ON
6 CUE Ⓛ
5 REVIEW Ⓛ
4 CAP LOCK
3 CAP ON/OFF
2 TURN OVER PULCE
1 CAP POSI/NEGA
P2007
1 M3
2 M2
3 M1
4 GND
5 FG
6 P3
7 P2
8 P1
9 PCOM
10 OSC
11 Vcc
12 MCOM
FEED BACK
AMP
3 DIFFERENTIAL
AMP
PROCESS
BRAKE
LOCK DETECT
DETECT
OSCILLATOR
LOCK MEMORY
PRE DRIVE
CURRENT COMPARATOR
OSC
3 DIFFERENTIAL
FG CTRL
TORQU CTRL
VOLTAGE COMPARATOR
FR DETECTER
F2001
2001 1mH

TP2001 Rec. mode 5V/10msec. div.

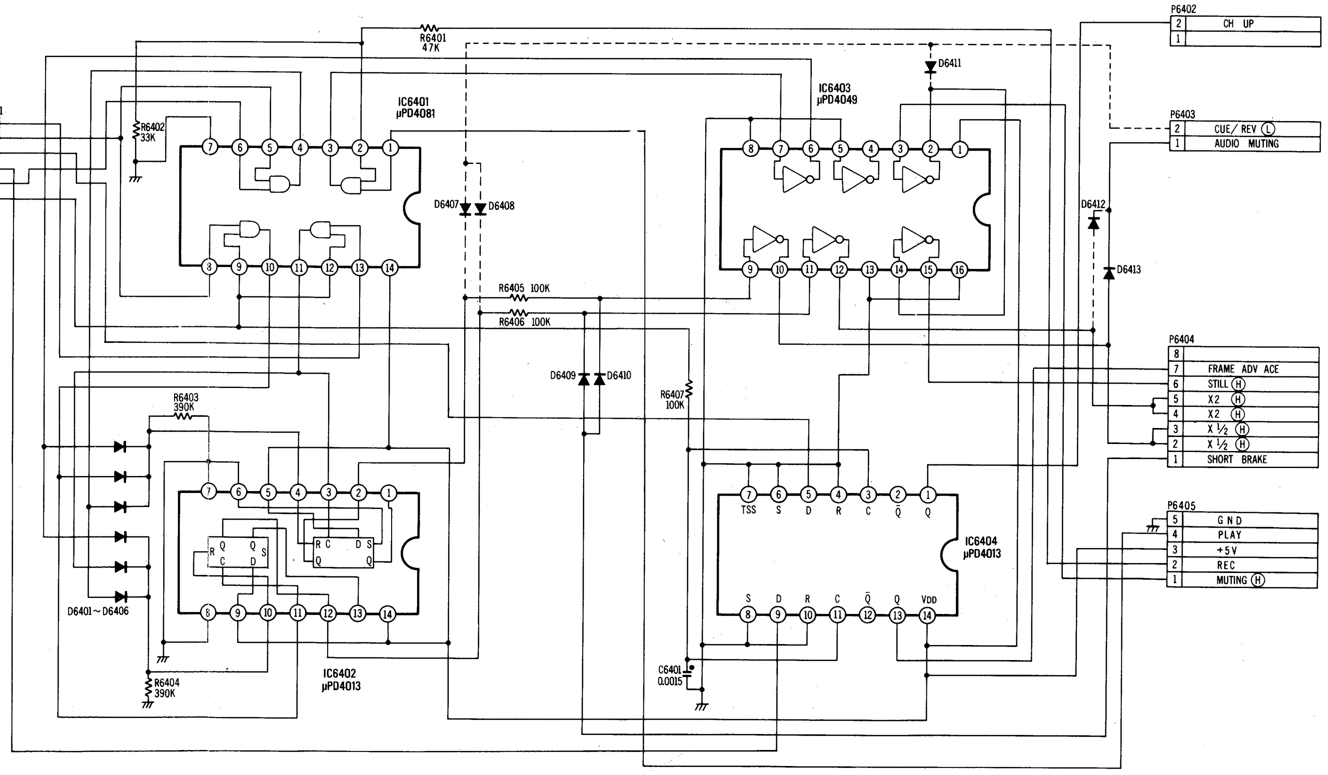
TP2002 Rec. mode 5V/10msec. div.

TP2003 Rec. mode 5V/10msec. div.

TP2004 Rec. mode 0.1V/10msec. div.

TP2005 Rec. mode 2V/10msec. div.

TP2006 1V/2msec. div.


IC6401 µPD4081
IC6402 µPD4013
IC6403 µPD4049
IC6404 µPD4013
P6401
MICON A0 1
MICON A1 2
MICON A2 3
MICON A3 4
MICON C2 5
MICON C3 6
P6402
2 CH UP
1
P6403
2 CUE/REV Ⓛ
1 AUDIO MUTING
P6404
8
7 FRAME ADV ACE
6 STILL Ⓗ
5 X2 Ⓗ
4 X2 Ⓗ
3 X½ Ⓗ
2 X½ Ⓗ
1 SHORT BRAKE
P6405
5 GND
4 PLAY
3 +5V
2 REC
1 MUTING Ⓗ
R6401 47K
R6402 33K
R6403 390K
R6404 390K
R6405 100K
R6406 100K
R6407 100K
C6401 0.0015
D6401~D6406
D6407
D6408
D6409
D6410
D6411
D6412
D6413

H I J K L M N O P Q R

SERVO & SUB-SYSTEM CONTROL CIRCUIT BOARD (VEP0214A)

P2004

1	STILL ADV Ⓗ
2	STILL PULSE
3	STILL SHORT ½ Ⓗ
4	REF 25Hz
5	PAUSE RESET OUT

P6405

1	MUTING Ⓗ
2	REC
3	+ 5V
4	PLAY
5	GND

P6404

1	SHORT BRAKE
2	X½ Ⓗ
3	X½ Ⓗ
4	X 2 Ⓗ
5	X 2 Ⓗ
6	STILL Ⓗ
7	FIAM ADVANCE
8	

P6402

1	
2	CH UP

P6403

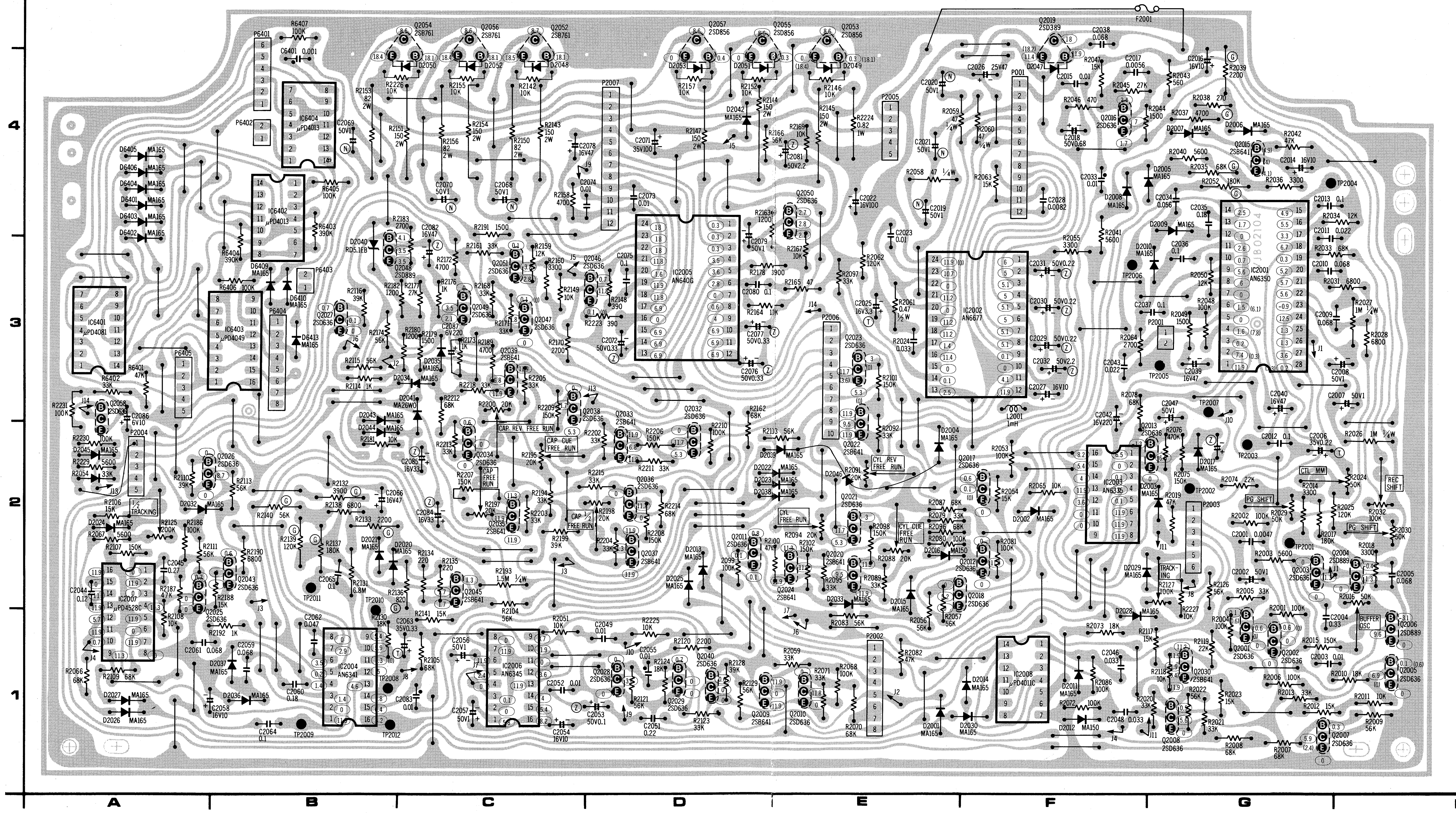
1	(CUE/REW Ⓛ)
2	AUDIO MUTING

P6401

1	MICON A⌀
2	MICON A 1
3	MICON A 2
4	MICON A 3
5	MICON C 2
6	MICON C 3

P2007

1	M 3
2	M 2
3	M 1
4	GND
5	FG
6	P 3
7	P 2
8	P 1
9	P COM
10	OSC
11	VCC
12	M COM


5
4
3
2
1
A
B
C
D
E
F
G
H
IC6401 μPD4081
IC6402 μPD4013
IC6403 μPD4049
IC6404 μPD4013
IC2005 AN6406
IC2002 AN6677
IC2001 AN6350
IC2003 AN6335
IC2004 AN6341
IC2006 AN6345
IC2007 μPD4528C
IC2008 μPD4011C
F2001
L2001 1mH
JB02104
CAP REV FREE RUN
CAP CUE FREE RUN
CAP FREE RUN
CAP ½ FREE RUN
CYL REV FREE RUN
CYL FREE RUN
CYL CUE FREE RUN
CTL MM
PG SHIFT
REC SHIFT
BUFFER OSC
TRACKING
½ TRACKING

P001

1	PG
2	OPEN
3	M 3
4	M 2
5	M 1
6	M COM
7	P 3
8	P 2
9	P 1
10	P COM
11	GND
12	OSC

P2005

1	+12V
2	CYL +21V
3	+21V
4	GND
5	GND

P2001

1	CTL H ⊖
2	CTL H ⊕

P2006

1	CAP PSI/NEGA
2	TURN OVER PULSE
3	CAP ON-OFF
4	CAP LOCK
5	REV Ⓛ
6	CUE Ⓛ
7	CYL ON-OFF
8	LOADING GND Ⓗ
9	CYL LOCK
10	STILL PAUSE Ⓛ

P2003

1	PG SW
2	VSS
3	REC H
4	TRACKING VR
5	TRACKING VR
6	TRACKING MM OUT

P2002

1	
2	½ X9 Ⓗ
3	PINCH SOL OFF Ⓗ
4	X ½ Ⓗ
5	X 9 Ⓛ
6	X 2 Ⓗ
7	X 2 Ⓗ
8	PAUSE RESET Ⓛ

DARD (VEP0214A)

4

SHORT BRAKE
X½ Ⓗ
X½ Ⓗ
X 2 Ⓗ
X 2 Ⓗ
STILL Ⓗ
FIAM ADVANCE

P6402

1	
2	CH UP

P6403

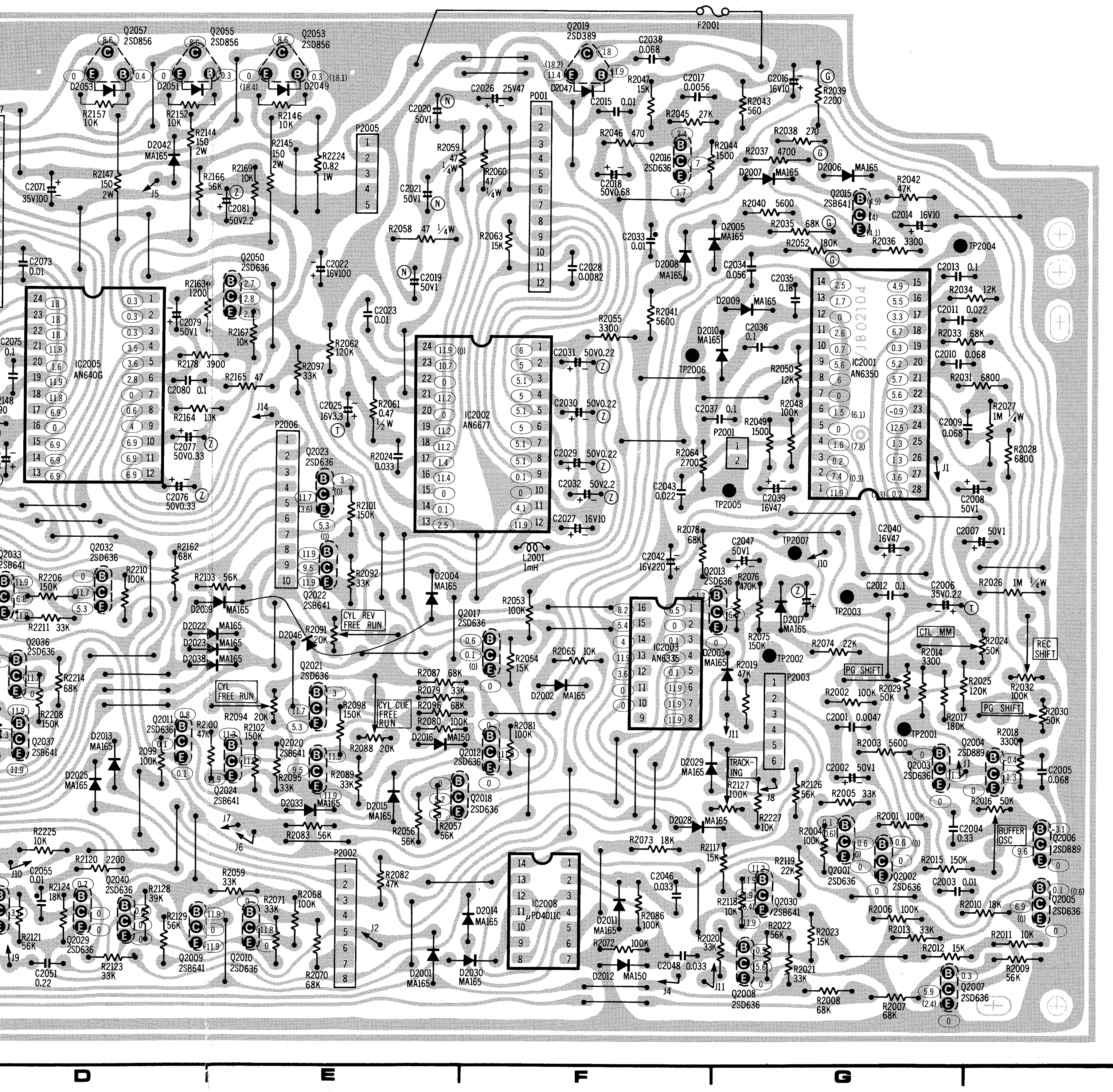
1	(CUE/REW Ⓛ)
2	AUDIO MUTING

P6401

1	MICON A⌀
2	MICON A 1
3	MICON A 2
4	MICON A 3
5	MICON C 2
6	MICON C 3

P2007

1	M 3
2	M 2
3	M 1
4	GND
5	FG
6	P 3
7	P 2
8	P 1
9	P COM
10	OSC
11	VCC
12	M COM



Q2057 2SD856
Q2055 2SD856
Q2053 2SD856
Q2019 2SD389
F2001
IC2005 AN6406
IC2002 AN6677
IC2001 AN6350
IC2003 AN6335
IC2008 μPD4011C
P2005
P2006
P2003
P2002
P001
P2001
TP2004
TP2006
TP2005
TP2007
TP2003
TP2002
TP2001
CYL REV FREE RUN
CYL FREE RUN
CYL CUE FREE RUN
CTL MM
PG SHIFT
REC SHIFT
BUFFER OSC
TRACKING
D
E
F
G
H

P001

1	PG
2	OPEN
3	M 3
4	M 2
5	M 1
6	M COM
7	P 3
8	P 2
9	P 1
10	P COM
11	GND
12	OSC

P2005

1	+12V
2	CYL +21V
3	+21V
4	GND
5	GND

P2001

1	CTL H ⊖
2	CTL H ⊕

P2006

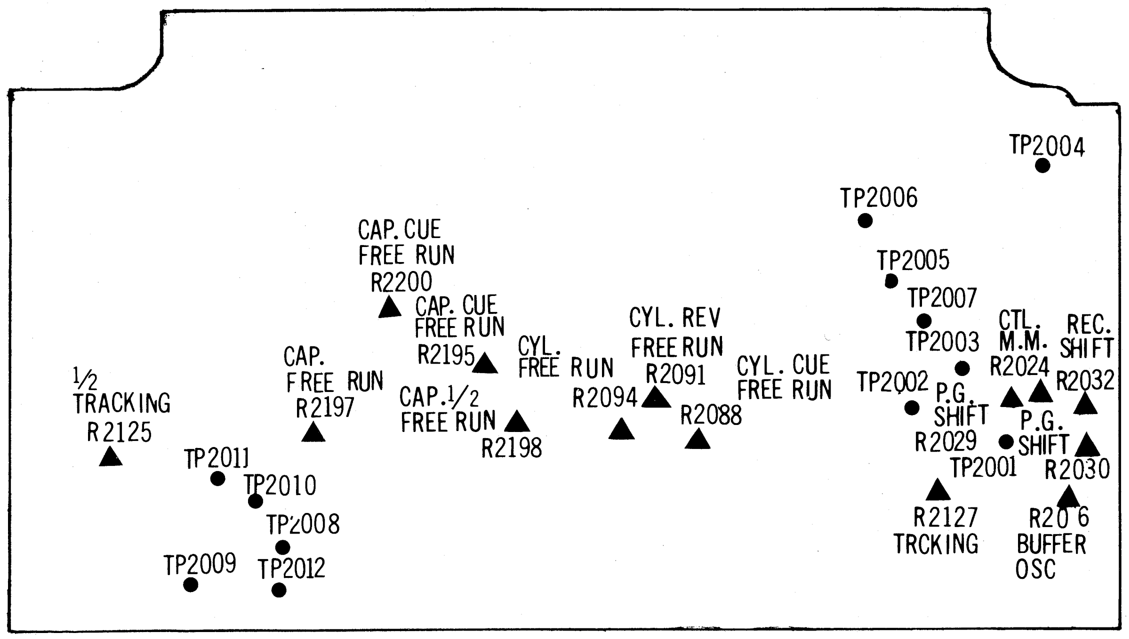
1	CAP PSI/NEGA
2	TURN OVER PULSE
3	CAP ON-OFF
4	CAP LOCK
5	REV Ⓛ
6	CUE Ⓛ
7	CYL ON-OFF
8	LOADING GND Ⓗ
9	CYL LOCK
10	STILL PAUSE Ⓛ

P2003

1	PG SW
2	VSS
3	REC H
4	TRACKING VR
5	TRACKING VR
6	TRACKING MM OUT

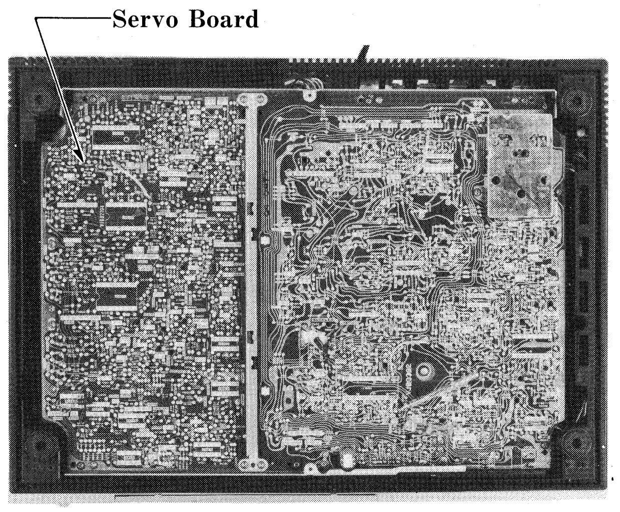
P2002

1	
2	½ X9 Ⓗ
3	PINCH SOL OFF Ⓗ
4	X½ Ⓗ
5	X9 Ⓛ
6	X2 Ⓗ
7	X2 Ⓗ
8	PAUSE RESET Ⓛ



TP2004
TP2006
TP2005
TP2007
TP2003
CAP. CUE FREE RUN R2200
CAP. CUE FREE RUN R2195
CYL. FREE RUN R2094
CYL. REV FREE RUN R2091
CYL. CUE FREE RUN
CTL. M.M. R2024
REC. SHIFT R2032
CAP. FREE RUN R2197
CAP. ½ FREE RUN R2198
R2088
½ TRACKING R2125
TP2002
P.G. SHIFT R2029
P.G. SHIFT R2030
TP2011
TP2010
TP2008
TP2009
TP2012
TP2001
R2127 TRCKING
R2016 BUFFER OSC

Servo C.B.A.	
Q2001	G-1
Q2002	G-1
Q2003	G-2
Q2004	H-2
Q2005	H-1
Q2006	G-1
Q2007	G-1
Q2008	G-1
Q2009	D-1
Q2010	F-1
Q2011	D-2
Q2012	F-2
Q2013	G-2
Q2015	G-4
Q2016	F-4
Q2017	F-2
Q2018	E-2
Q2019	F-4
Q2020	E-2
Q2021	E-2
Q2022	E-2
Q2023	E-3
Q2024	E-2
Q2025	A-1
Q2026	B-2
Q2027	B-3
Q2028	D-1
Q2029	D-1
Q2030	G-1
Q2032	D-2
Q2033	D-2
Q2034	C-2
Q2035	C-2
Q2036	D-2
Q2037	D-2
Q2038	C-3
Q2039	C-3
Q2040	D-1
Q2043	B-2
Q2045	C-2
Q2046	D-3
Q2047	C-3
Q2048	B-3
Q2049	C-3
Q2050	E-4
Q2051	C-3
Q2052	C-4
Q2053	E-4
Q2054	C-4
Q2055	D-4
Q2056	C-4
Q2057	D-4
Q2058	A-2



Servo Board

P6403 (Control & Sub System Control C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	CUE/REV (L)	— —
2	Audio Muting	P6207-2 System Control

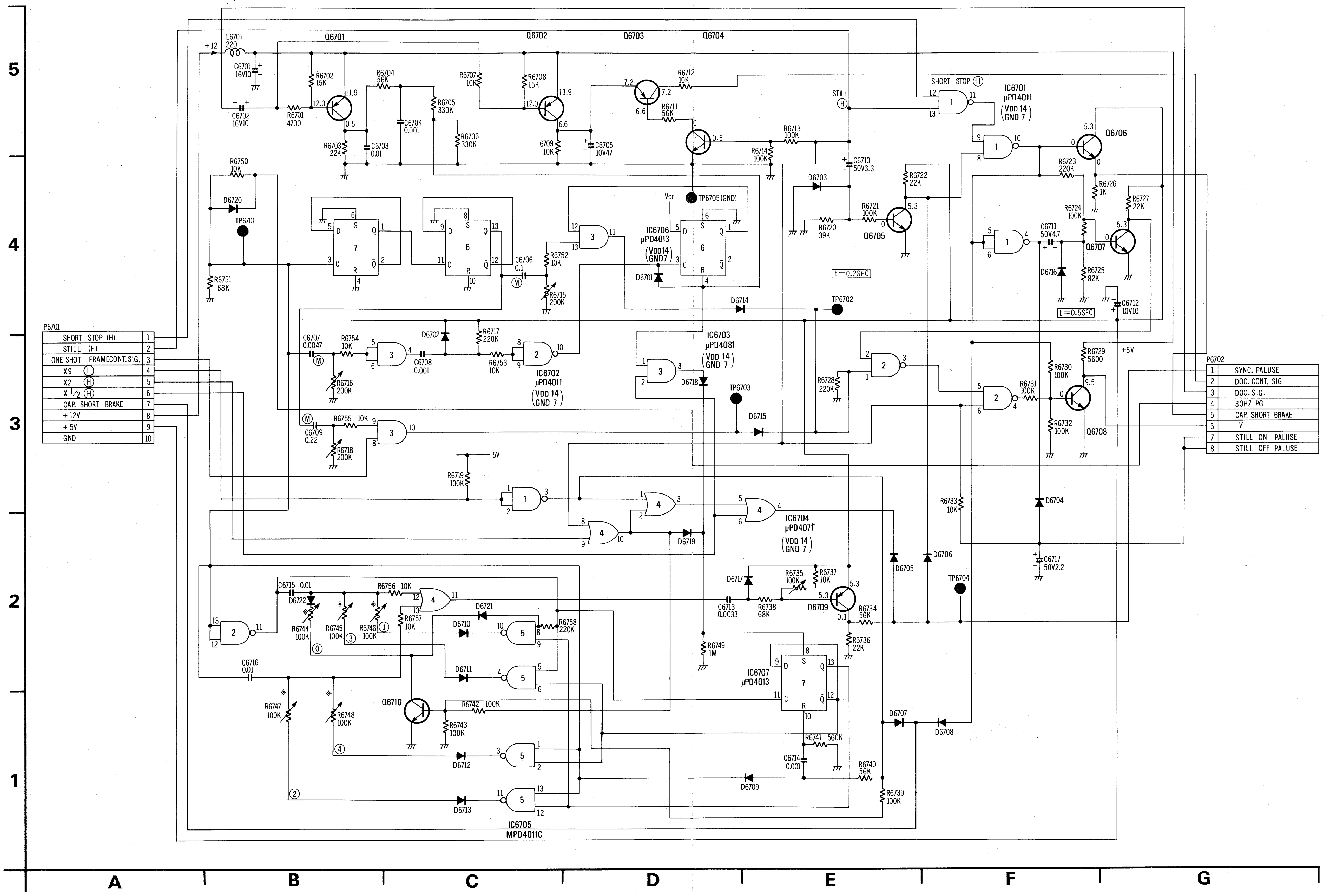
P6404 (Control & Sub System Control C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	Short Brake	P6701-7 Still
2	1/2 (H)	P2002-4 Control & Sub System Control
3	1/2 (H)	P6701-6 Still
4	×2 (H)	P2002-6 Control & Sub System Control
5	×2 (H)	P6701-5 Still
6	Still (H)	P6701-2 Still
7	Frame Advance	P6701-3 Still
8	—	— —

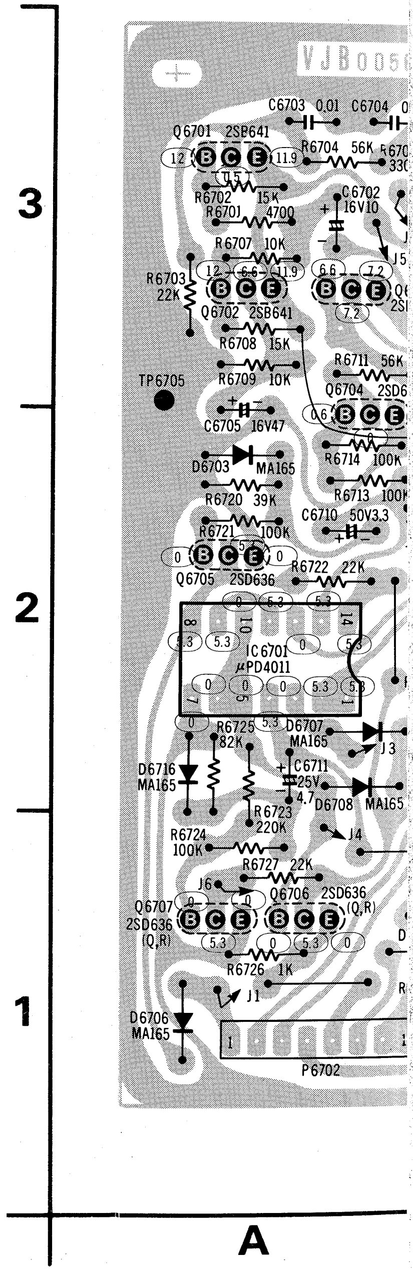
P6405 (Control & Sub System Control C.B.A)

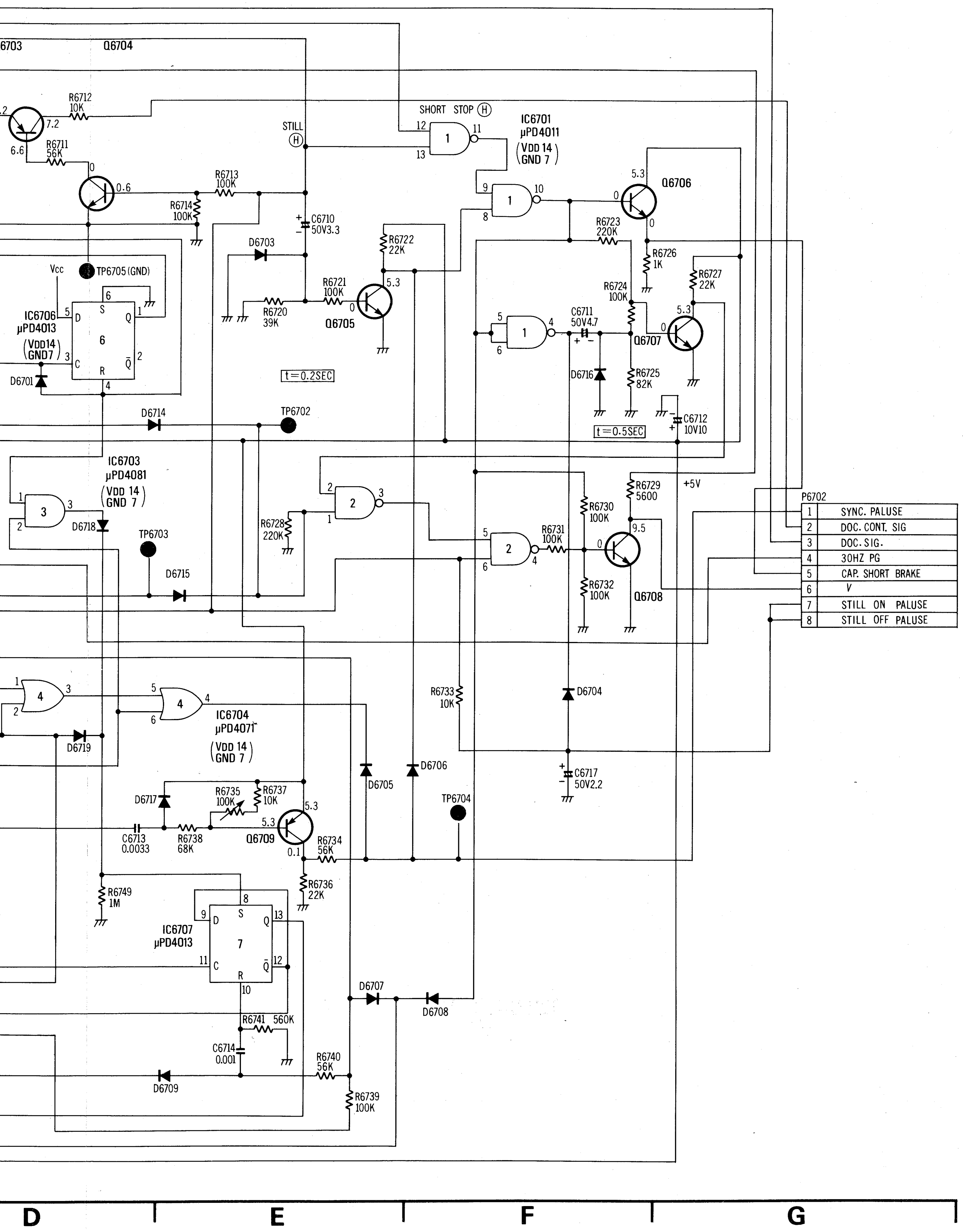
PIN NO.	SIGNAL NAME	DESTINATION
1	Muting (H)	P6505-1 Operation
2	REC	P6505-2 Operation
3	+5V	P6505-3 Operation
4	Play	P6505-4 Operation
5	GND	P6505-5 Operation

STILL SCHEMATIC DIAGRAM


5
4
3
2
1
A
B
C
D
E
F
G
P6701
SHORT STOP (H) 1
STILL (H) 2
ONE SHOT FRAMECONT. SIG. 3
X9 (L) 4
X2 (H) 5
X 1/2 (H) 6
CAP. SHORT BRAKE 7
+12V 8
+5V 9
GND 10
P6702
1 SYNC. PALUSE
2 DOC. CONT. SIG
3 DOC. SIG.
4 30HZ PG
5 CAP. SHORT BRAKE
6 V
7 STILL ON PALUSE
8 STILL OFF PALUSE
+12
L6701 220
C6701 16V10
C6702 16V10
R6701 4700
Q6701
R6702 15K
R6703 22K
C6703 0.01
R6704 56K
C6704 0.001
R6705 330K
R6706 330K
Q6702
R6707 10K
R6708 15K
6709 10K
C6705 10V47
Q6703
Q6704
R6711 56K
R6712 10K
R6713 100K
R6714 100K
STILL (H)
C6710 50V3.3
SHORT STOP (H)
IC6701 µPD4011 (VDD 14 GND 7)
Q6706
R6723 220K
R6726 1K
R6727 22K
R6724 100K
C6711 50V4.7
Q6707
D6716
R6725 82K
C6712 10V10
t=0.5SEC
R6722 22K
D6703
R6720 39K
R6721 100K
Q6705
t=0.2SEC
TP6702
R6750 10K
D6720
TP6701
R6751 68K
C6706 0.1
R6752 10K
R6715 200K
IC6706 µPD4013 (VDD14 GND7)
Vcc
TP6705 (GND)
D6701
D6714
C6707 0.0047
R6754 10K
R6716 200K
D6702
C6708 0.001
R6717 220K
R6753 10K
IC6702 µPD4011 (VDD 14 GND 7)
IC6703 µPD4081 (VDD 14 GND 7)
D6718
TP6703
D6715
R6728 220K
R6729 5600
+5V
R6730 100K
R6731 100K
R6732 100K
Q6708
C6709 0.22
R6755 10K
R6718 200K
5V
R6719 100K
IC6704 µPD4071 (VDD 14 GND 7)
D6719
D6705
D6706
R6733 10K
D6704
C6717 50V2.2
TP6704
D6717
R6735 100K
R6737 10K
R6738 68K
C6713 0.0033
Q6709
R6734 56K
R6736 22K
R6749 1M
C6715 0.01
D6722
R6756 10K
R6744 100K
R6745 100K
R6746 100K
R6757 10K
D6721
D6710
R6758 220K
C6716 0.01
D6711
IC6707 µPD4013
Q6710
R6742 100K
R6743 100K
R6747 100K
R6748 100K
D6712
D6713
D6707
D6708
R6741 560K
C6714 0.001
D6709
R6740 56K
R6739 100K
IC6705 MPD4011C

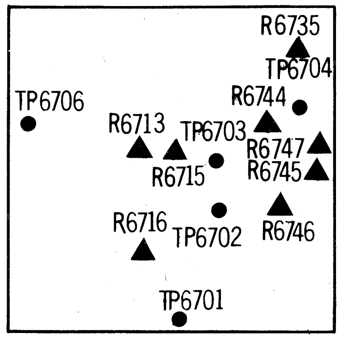
STILL CIRCUIT


3
2
1
A
VJB005
C6703 0.01
C6704
Q6701 2SB641
R6704 56K
R6702 15K
R6701 4700
C6702 16V10
R6707 10K
R6703 22K
Q6702 2SB641
R6708 15K
R6709 10K
R6711 56K
Q6704 2SD6
TP6705
C6705 16V47
D6703 MA165
R6714 100K
R6720 39K
R6713 100K
C6710 50V3.3
R6721 100K
Q6705 2SD636
R6722 22K
IC6701 µPD4011
R6725 82K
D6707 MA165
D6716 MA165
C6711 25V 4.7
D6708 MA165
R6723 220K
R6724 100K
R6727 22K
Q6707 2SD636 (Q,R)
Q6706 2SD636 (Q,R)
R6726 1K
D6706 MA165
P6702
J1
J3
J4
J5
J6



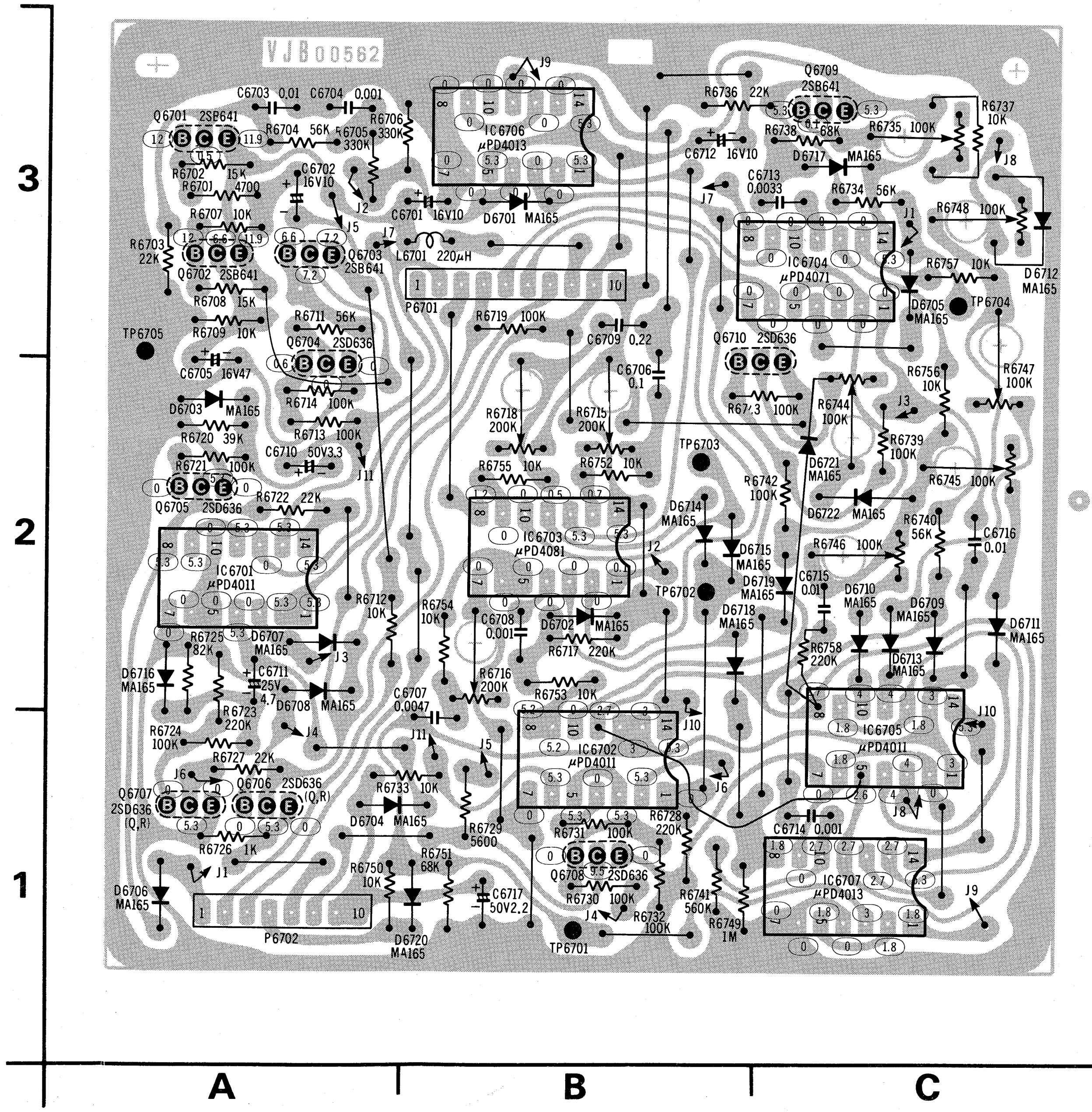
Q6704
SHORT STOP Ⓗ
STILL Ⓗ
IC6701
μPD4011
(VDD 14 / GND 7)
Q6706
Q6705
Q6707
Q6708
Q6709
IC6706
μPD4013
(VDD14 / GND7)
TP6705 (GND)
IC6703
μPD4081
(VDD 14 / GND 7)
IC6704
μPD4071
(VDD 14 / GND 7)
IC6707
μPD4013
TP6702
TP6703
TP6704
t=0.2SEC
t=0.5SEC
+5V
P6702
1 SYNC. PALUSE
2 DOC. CONT. SIG
3 DOC. SIG.
4 30HZ PG
5 CAP. SHORT BRAKE
6 V
7 STILL ON PALUSE
8 STILL OFF PALUSE
D
E
F
G

Still C.B.A.	
Q6071	A-3
Q6702	A-3
Q6703	A-3
Q6704	A-2
Q6705	A-2
Q6706	A-1
Q6707	A-1
Q6708	B-1
Q6709	C-3
Q6710	C-2



R6735
TP6704
TP6706
R6744
R6713
TP6703
R6747
R6715
R6745
R6716
TP6702
R6746
TP6701

STILL CIRCUIT BOARD (VEP00562A)



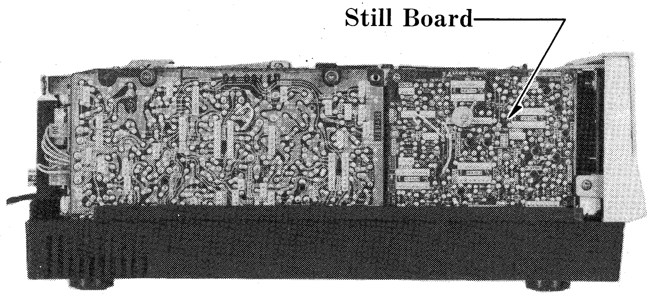
VJB00562
IC6701 μPD4011
IC6702 μPD4011
IC6703 μPD4081
IC6704 μPD4071
IC6705 μPD4011
IC6706 μPD4013
IC6707 μPD4013
P6701
P6702
TP6701
TP6702
TP6703
TP6704
TP6705
3
2
1
A
B
C
D

P6701

1	SHORT STOP
2	STILL
3	FRAME AD MAKE
4	X9
5	X2
6	X ½
7	CAP. SHORT BRAKE
8	12V
9	5V
10	GND

P6702

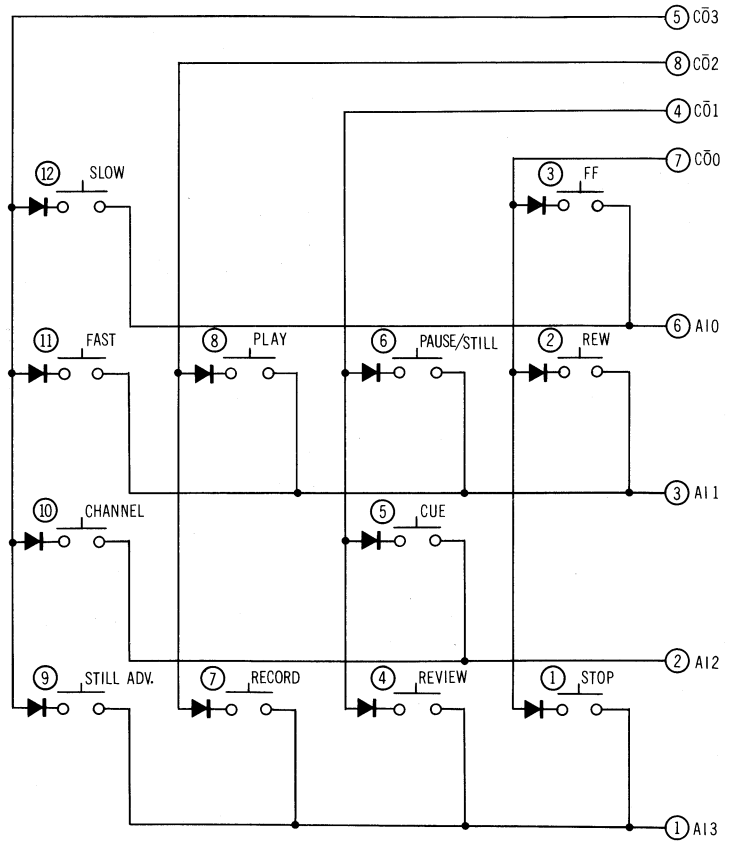
1	V STNC PULSE
2	DOC CONTROL
3	DOC PULSE
4	PG SW PULSE
5	CAP. SHORT BRAKE
6	CAP. PULSE DRIVE
7	STILL ON PULSE
8	STILL ON PULSE


Still Board

P6701 (Still C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Short Stop (H)	P6013-1 System Control I
2	Still (H)	P6404-6 Control & Sub System Control
3	Frame Advance	P6404-7 Control & Sub System Control
4	×9 (L)	P6013-2 System Control I
5	×2 (H)	P6404-5 Control & Sub System Control
6	×1/2 (H)	P6404-3 Control & Sub System Control
7	CAP. Short Brake	P6404-1 Control & Sub System Control
8	12V	P6013-3 System Control I
9	5V	P6013-4 System Control I
10	GND	P6013-5 System Control I

P6702 (Still C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	V Sync. Pulse	P3010-1 Luminance & Chrominance
2	DOC Control	P3010-2 Luminance & Chrominance
3	DOC Pulse	P3010-3 Luminance & Chrominance
4	PG SW Pulse	P3010-4 Luminance & Chrominance
5	CAP. Short Brake	P3010-5 Luminance & Chrominance
6	CAP. Pulse Drive	P3010-6 Luminance & Chrominance
7	Still ON Pulse	P3010-7 Luminance & Chrominance
8	Still ON Pulse	— —

REMOTE CONTROL CIRCUIT

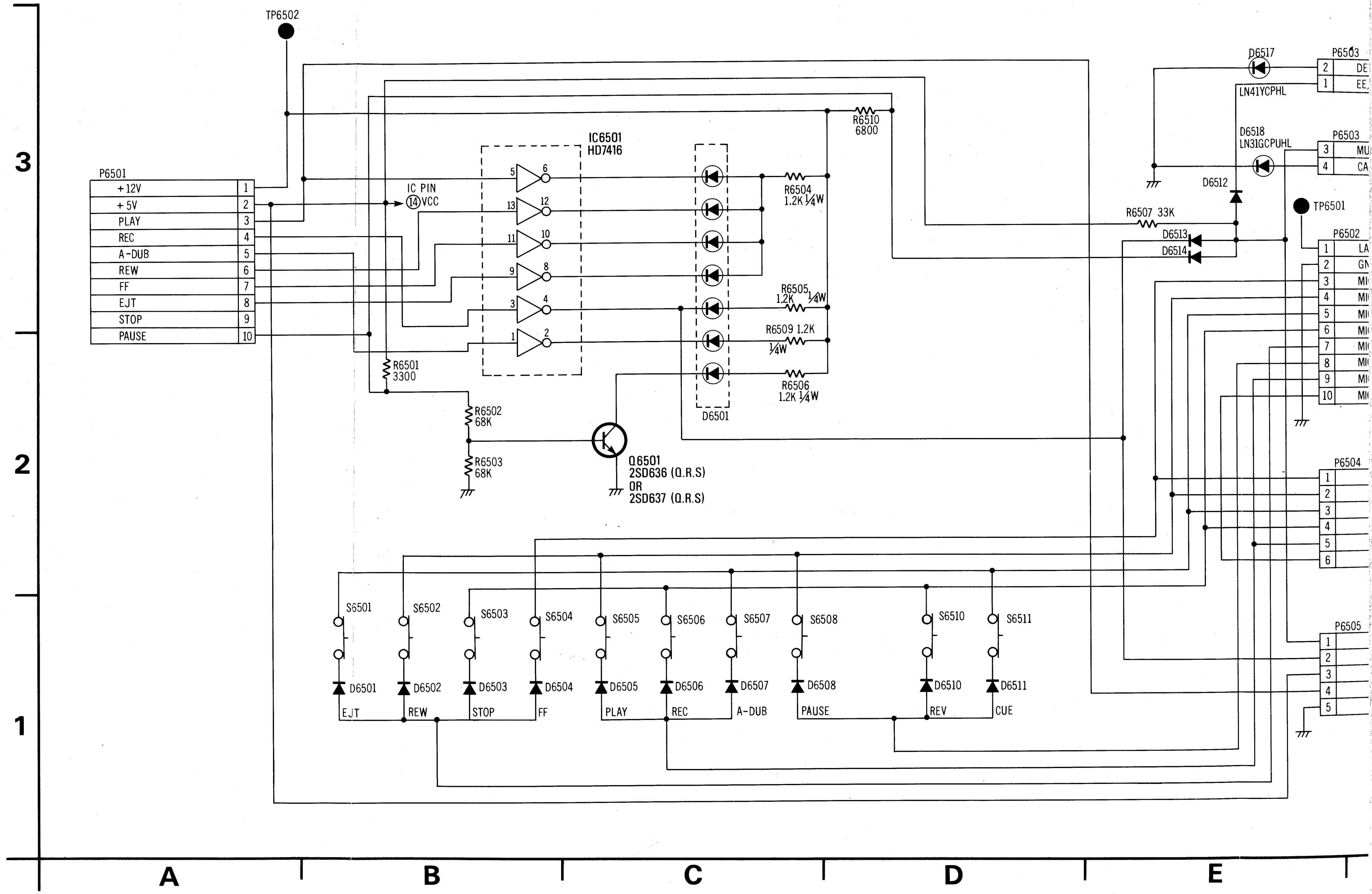

⑤CŌ3
⑧CŌ2
④CŌ1
⑦CŌ0
⑫ SLOW
③ FF
⑪ FAST
⑧ PLAY
⑥ PAUSE/STILL
② REW
⑥AI0
⑩ CHANNEL
⑤ CUE
③AI1
②AI2
⑨ STILL ADV.
⑦ RECORD
④ REVIEW
① STOP
①AI3

P6501 (Operation C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	12V	P6006-1 System Control I
2	5V	P6006-2 System Control I
3	Play	P6006-3 System Control I
4	REC	P6006-4 System Control I
5	A-Dub	P6006-5 System Control I
6	REW	P6006-6 System Control I
7	F.F	P6006-7 System Control I
8	Eject	P6006-8 System Control I
9	Stop	P6006-9 System Control I
10	Pause	P6006-10 System Control I

P6502 (Operation C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Lamp	P6008-1 System Control I
2	GND	P6008-2 System Control I
3	Micon A0	P6008-3 System Control I
4	Micon A1	P6008-4 System Control I
5	Micon A2	P6008-5 System Control I
6	Micon A3	P6008-6 System Control I
7	Micon C0	P6008-7 System Control I
8	Micon C1	P6008-8 System Control I
9	Micon C2	P6008-9 System Control I
10	Micon C3	P6008-10 System Control I

P6503 (Operation C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	EE/VV Select	P6207-4 System Control II
2	DEW LED	P6201-3 System Control II
3	—	— —
4	Camera LED	P3001-2 Luminance & Chrominance
5	—	— —

OPERATION SCHEMATIC DIAGRAM


3
2
1
TP6502
P6501
+12V 1
+5V 2
PLAY 3
REC 4
A-DUB 5
REW 6
FF 7
EJT 8
STOP 9
PAUSE 10
IC PIN
⑭VCC
IC6501
HD7416
R6510
6800
R6504
1.2K ¼W
R6505
1.2K ¼W
R6509 1.2K
¼W
R6506
1.2K ¼W
D6501
R6501
3300
R6502
68K
R6503
68K
Q6501
2SD636 (Q.R.S)
OR
2SD637 (Q.R.S)
D6517
LN41YCPHL
P6503
2 DE
1 EE
D6518
LN31GCPUHL
P6503
3 MU
4 CA
D6512
TP6501
R6507 33K
D6513
D6514
P6502
1 LA
2 GN
3 MI
4 MI
5 MI
6 MI
7 MI
8 MI
9 MI
10 MI
P6504
1
2
3
4
5
6
P6505
1
2
3
4
5
S6501
S6502
S6503
S6504
S6505
S6506
S6507
S6508
S6510
S6511
D6501
D6502
D6503
D6504
D6505
D6506
D6507
D6508
D6510
D6511
EJT
REW
STOP
FF
PLAY
REC
A-DUB
PAUSE
REV
CUE
A
B
C
D
E

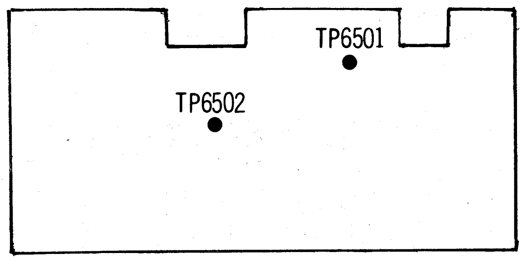
AL NAME	DESTINATION
ct	P6207-4 System Control II
	P6201-3 System Control II
	— —
D	P3001-2 Luminance & Chrominance
	— —

P6504 (Operation C.B.A)

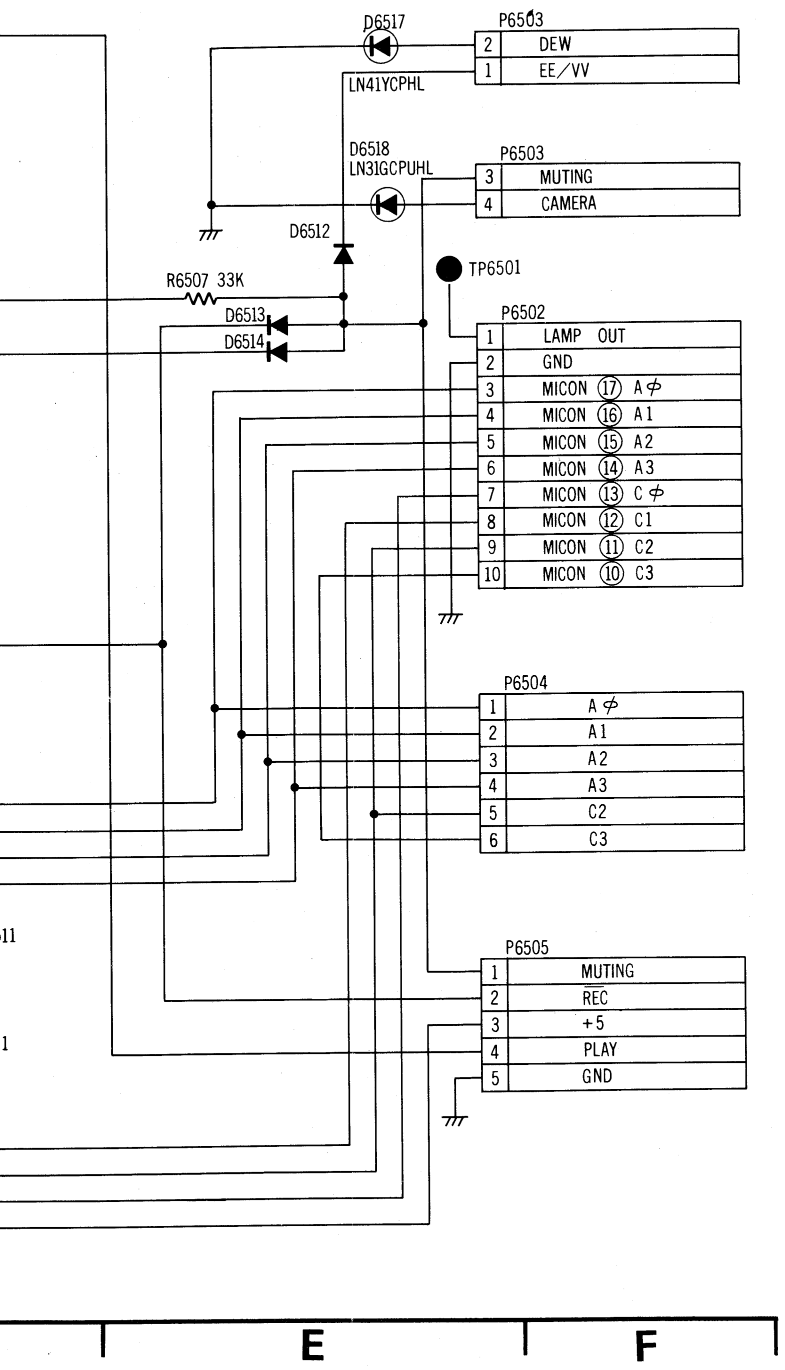
PIN NO.	SIGNAL NAME	DESTINATION
1	Micon A0	P6401-1 Control & Sub System Control
2	Micon A1	P6401-2 Control & Sub System Control
3	Micon A2	P6401-3 Control & Sub System Control
4	Micon A3	P6401-4 Control & Sub System Control
5	Micon C2	P6401-5 Control & Sub System Control
6	Micon C3	P6401-6 Control & Sub System Control

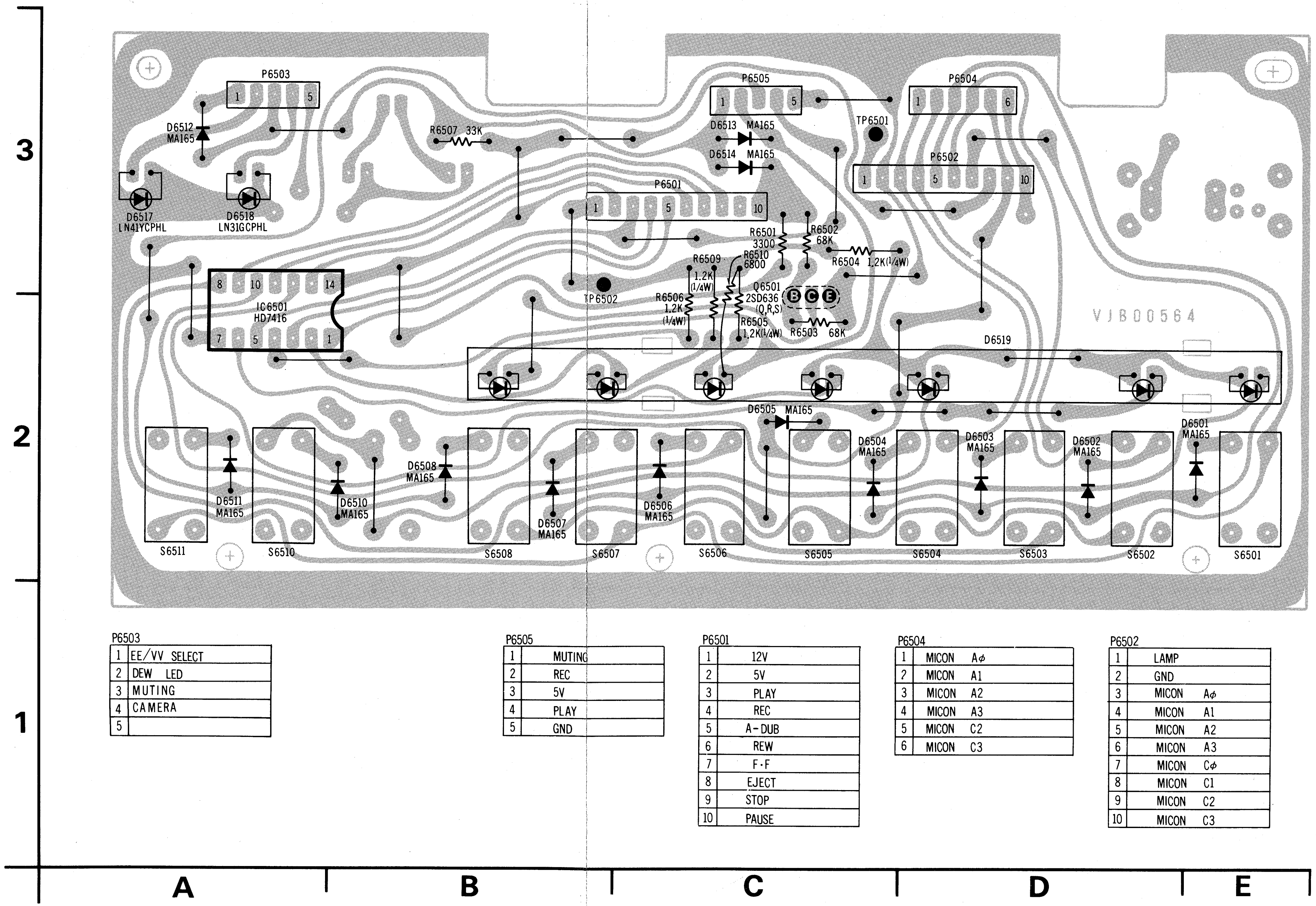
P6505 (Operation C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	Muting	P6405-1 Control & Sub System Control
2	REC	P6405-2 Control & Sub System Control
3	5V	P6405-3 Control & Sub System Control
4	Play	P6405-4 Control & Sub System Control
5	GND	P6405-5 Control & Sub System Control


TP6501
TP6502

OPERATION CIRCUIT BOARD (VEP00564A)


D6517
LN41YCPHL
P6503
2 DEW
1 EE/VV
D6518
LN31GCPUHL
P6503
3 MUTING
4 CAMERA
D6512
R6507 33K
D6513
D6514
TP6501
P6502
1 LAMP OUT
2 GND
3 MICON ⑰ Aφ
4 MICON ⑯ A1
5 MICON ⑮ A2
6 MICON ⑭ A3
7 MICON ⑬ Cφ
8 MICON ⑫ C1
9 MICON ⑪ C2
10 MICON ⑩ C3
P6504
1 Aφ
2 A1
3 A2
4 A3
5 C2
6 C3
P6505
1 MUTING
2 REC
3 +5
4 PLAY
5 GND
11
1
E
F


3
2
1
A
B
C
D
E
P6503
P6505
P6504
P6502
P6501
TP6501
TP6502
D6512 MA165
D6513 MA165
D6514 MA165
R6507 33K
D6517 LN41YCPHL
D6518 LN31GCPHL
IC6501 HD7416
R6501 3300
R6502 68K
R6510 6800
R6509 1.2K (1/4W)
R6504 1.2K(1/4W)
R6506 1.2K (1/4W)
R6505 1.2K(1/4W)
R6503 68K
Q6501 2SD636 (Q,R,S)
B C E
VJB00564
D6519
D6505 MA165
D6501 MA165
D6502 MA165
D6503 MA165
D6504 MA165
D6506 MA165
D6507 MA165
D6508 MA165
D6510 MA165
D6511 MA165
S6511
S6510
S6508
S6507
S6506
S6505
S6504
S6503
S6502
S6501

P6503

1	EE/VV SELECT
2	DEW LED
3	MUTING
4	CAMERA
5	

P6505

1	MUTING
2	REC
3	5V
4	PLAY
5	GND

P6501

1	12V
2	5V
3	PLAY
4	REC
5	A-DUB
6	REW
7	F·F
8	EJECT
9	STOP
10	PAUSE

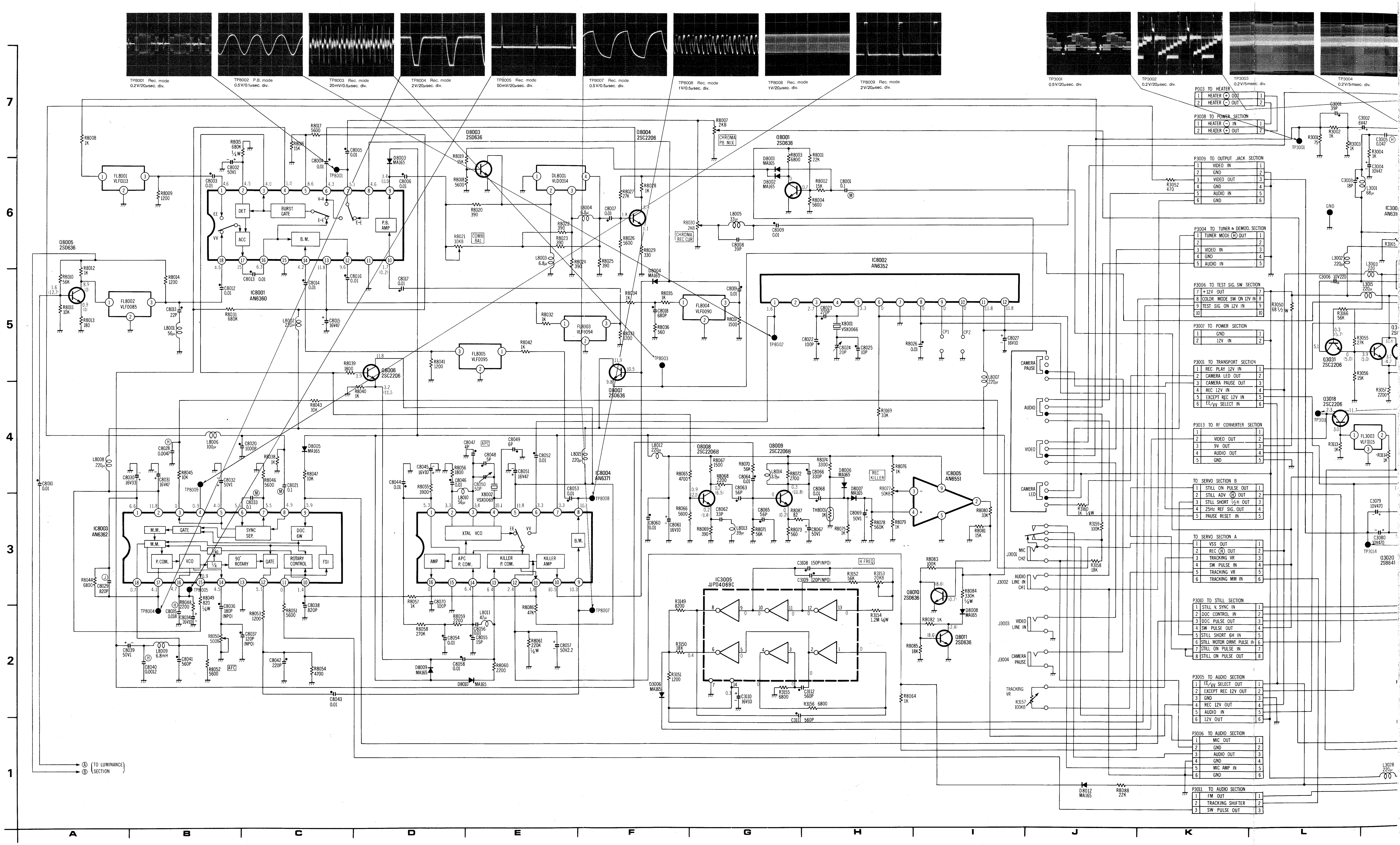
P6504

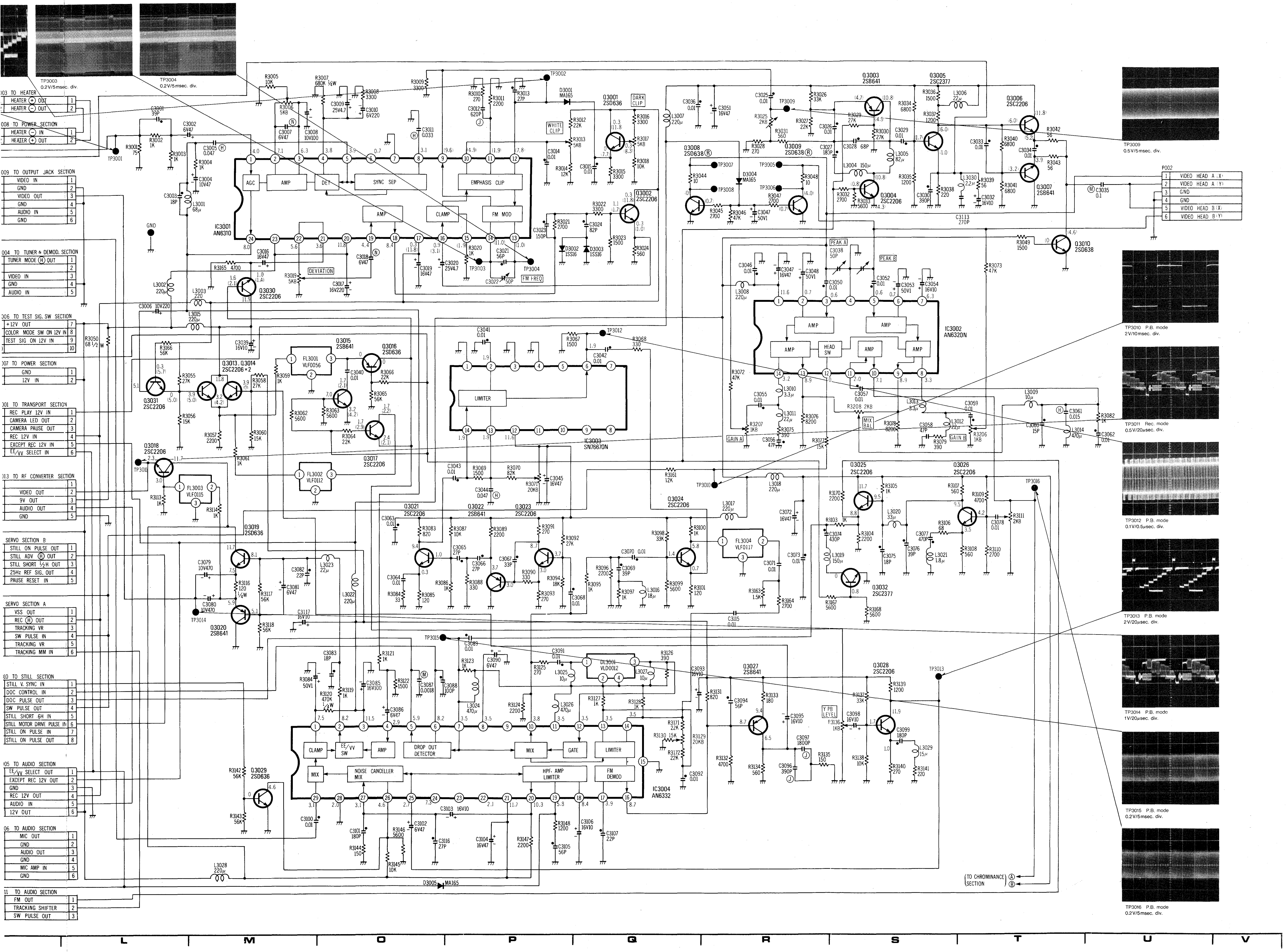
1	MICON Aφ
2	MICON A1
3	MICON A2
4	MICON A3
5	MICON C2
6	MICON C3

P6502

1	LAMP
2	GND
3	MICON Aφ
4	MICON A1
5	MICON A2
6	MICON A3
7	MICON Cφ
8	MICON C1
9	MICON C2
10	MICON C3

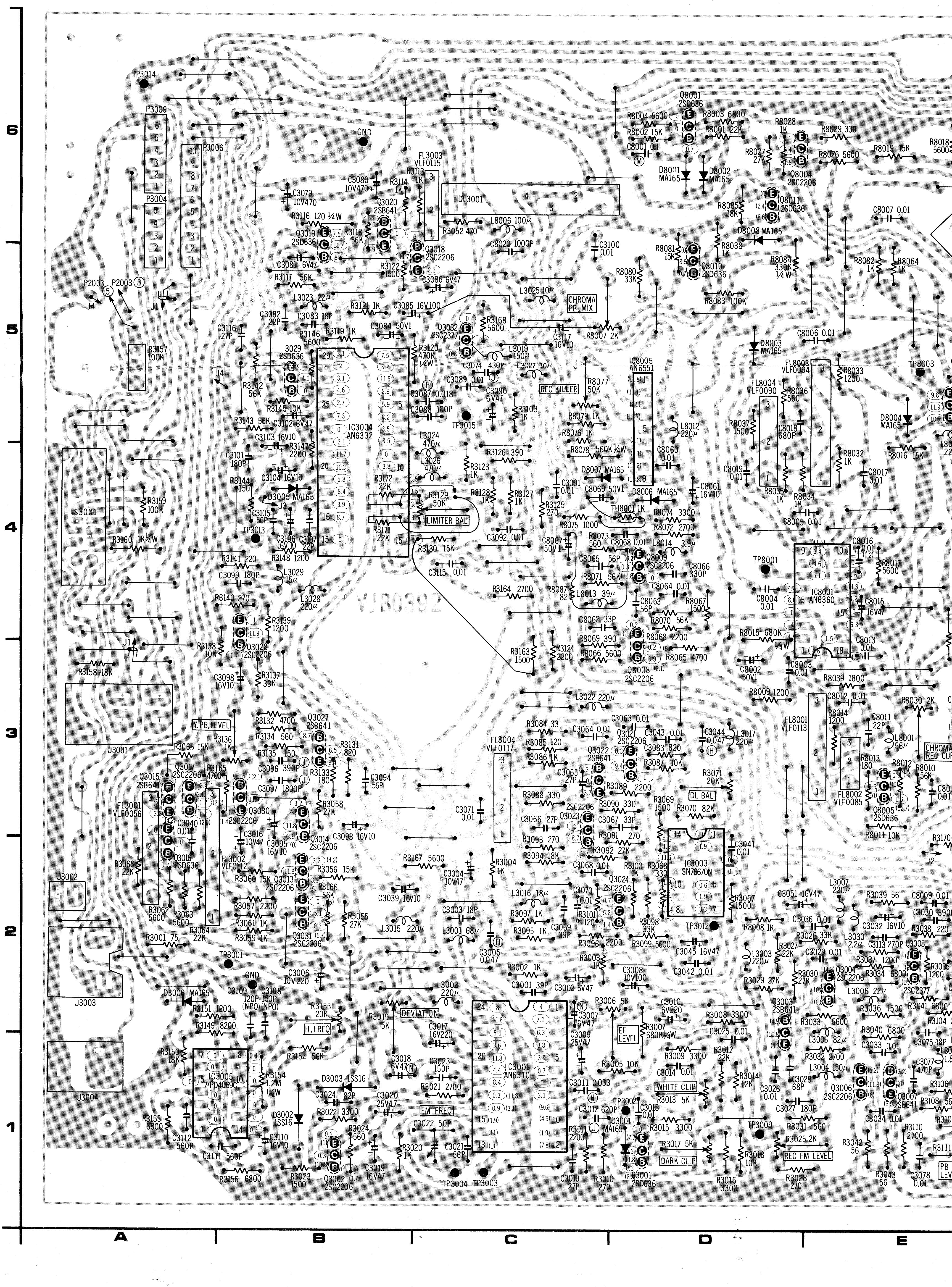
LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM


TP8001 Rec. mode 0.2V/20μsec. div.
TP8002 P.B. mode 0.5V/0.1μsec. div.
TP8003 Rec. mode 20mV/0.5μsec. div.
TP8004 Rec. mode 2V/20μsec. div.
TP8005 Rec. mode 50mV/20μsec. div.
TP8007 Rec. mode 0.5V/0.5μsec. div.
TP8008 Rec. mode 1V/0.5μsec. div.
TP8008 Rec. mode 1V/20μsec. div.
TP8009 Rec. mode 2V/20μsec. div.
TP3001 0.5V/20μsec. div.
TP3002 0.2V/20μsec. div.
TP3003 0.2V/5msec. div.
TP3004 0.2V/5msec. div.
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K
L
IC8001 AN6360
DET
BURST GATE
ACC
B.M.
P.B. AMP
FL8001 VLF0113
FL8002 VLF0085
FL8003 VLF0094
FL8004 VLF0090
FL8005 VLF0095
DL8001 VLD0014
Q8001 2SD636
Q8003 2SD636
Q8004 2SC2206
Q8005 2SD636
Q8006 2SC2206
Q8007 2SD636
Q8008 2SC2206B
Q8009 2SC2206B
Q8010 2SD636
Q8011 2SD636
CHROMA PB MIX
CHROMA REC CUR
COMB BAL
IC8002 AN6352
X8001 VSX0066
CP1
CP2
IC8003 AN6362
M.M.
GATE
SYNC SEP.
DOC 6W
P. COM.
VCO
90° ROTARY
ROTARY CONTROL
FSI
IC8004 AN6371
XTAL VCO
X8002 VSX0069
APC
APC P. COM.
KILLER P. COM.
KILLER AMP
AMP
B.M.
IC8005 AN6551
REC KILLER
IC3005 μPD4069C
H FREQ
CAMERA PAUSE
AUDIO
VIDEO
CAMERA LED
J3001 MIC CH2
J3002 AUDIO LINE IN CH1
J3003 VIDEO LINE IN
J3004 CAMERA PAUSE
TRACKING VR
R3157 100KB
Ⓐ Ⓢ (TO LUMINANCE SECTION)
TP8001
TP8002
TP8003
TP8004
TP8005
TP8007
TP8008
TP8009
TP3001
TP3011
TP3014
GND
IC3001 AN631
Q3031 2SC2206
Q3018 2SC2206
Q3020 2SB641
FL3003 VLF0115
P003 TO HEATER
1 HEATER ⊕ OUT 1
2 HEATER ⊖ OUT 2
P3008 TO POWER SECTION
1 HEATER ⊖ IN 1
2 HEATER ⊕ OUT 2
P3009 TO OUTPUT JACK SECTION
1 VIDEO IN 1
2 GND 2
3 VIDEO OUT 3
4 GND 4
5 AUDIO IN 5
6 GND 6
P3004 TO TUNER & DEMOD. SECTION
1 TUNER MODE Ⓗ OUT 1
2 2
3 VIDEO IN 3
4 GND 4
5 AUDIO IN 5
P3006 TO TEST SIG. SW SECTION
7 +12V OUT 7
8 COLOR MODE SW ON 12V IN 8
9 TEST SIG ON 12V IN 9
10 10
P3007 TO POWER SECTION
1 GND 1
2 12V IN 2
P3001 TO TRANSPORT SECTION
1 REC PLAY 12V IN 1
2 CAMERA LED OUT 2
3 CAMERA PAUSE OUT 3
4 REC 12V IN 4
5 EXCEPT REC 12V IN 5
6 EE/VV SELECT IN 6
P3013 TO RF CONVERTER SECTION
1 1
2 VIDEO OUT 2
3 9V OUT 3
4 AUDIO OUT 4
5 GND 5
TO SERVO SECTION B
1 STILL ON PULSE OUT 1
2 STILL ADV Ⓗ OUT 2
3 STILL SHORT ½H OUT 3
4 25Hz REF SIG. OUT 4
5 PAUSE RESET IN 5
TO SERVO SECTION A
1 VSS OUT 1
2 REC Ⓗ OUT 2
3 TRACKING VR 3
4 SW PULSE IN 4
5 TRACKING VR 5
6 TRACKING MM IN 6
P3010 TO STILL SECTION
1 STILL V. SYNC IN 1
2 DOC CONTROL IN 2
3 DOC PULSE OUT 3
4 SW PULSE OUT 4
5 STILL SHORT 6H IN 5
6 STILL MOTOR DRIVE PULSE IN 6
7 STILL ON PULSE IN 7
8 STILL ON PULSE OUT 8
P3005 TO AUDIO SECTION
1 EE/VV SELECT OUT 1
2 EXCEPT REC 12V OUT 2
3 GND 3
4 REC 12V OUT 4
5 AUDIO IN 5
6 12V OUT 6
P3006 TO AUDIO SECTION
1 MIC OUT 1
2 GND 2
3 AUDIO OUT 3
4 GND 4
5 MIC AMP IN 5
6 GND 6
P3011 TO AUDIO SECTION
1 FM OUT 1
2 TRACKING SHIFTER 2
3 SW PULSE OUT 3
D8012 MA165
R8088 22K
L3028 220μ


TP3003 0.2V/5msec. div.
TP3004 0.2V/5msec. div.
TO HEATER
HEATER ⊕ OUT
HEATER ⊖ OUT
TO POWER SECTION
HEATER ⊖ IN
HEATER ⊕ OUT
TO OUTPUT JACK SECTION
VIDEO IN
GND
VIDEO OUT
AUDIO IN
TO TUNER & DEMOD. SECTION
TUNER MODE (H) OUT
TO TEST SIG. SW SECTION
+12V OUT
COLOR MODE SW ON 12V IN
TEST SIG ON 12V IN
TO POWER SECTION
12V IN
TO TRANSPORT SECTION
REC PLAY 12V IN
CAMERA LED OUT
CAMERA PAUSE OUT
REC 12V IN
EXCEPT REC 12V IN
EE/VV SELECT IN
TO RF CONVERTER SECTION
9V OUT
AUDIO OUT
SERVO SECTION B
STILL ON PULSE OUT
STILL ADV (H) OUT
STILL SHORT 1/2H OUT
25Hz REF SIG. OUT
PAUSE RESET IN
SERVO SECTION A
VSS OUT
REC (H) OUT
TRACKING VR
SW PULSE IN
TRACKING MM IN
TO STILL SECTION
STILL V. SYNC IN
DOC CONTROL IN
DOC PULSE OUT
SW PULSE OUT
STILL SHORT 6H IN
STILL MOTOR DRIVE PULSE IN
STILL ON PULSE IN
STILL ON PULSE OUT
TO AUDIO SECTION
EE/VV SELECT OUT
EXCEPT REC 12V OUT
REC 12V OUT
AUDIO IN
12V OUT
TO AUDIO SECTION
MIC OUT
AUDIO OUT
MIC AMP IN
TO AUDIO SECTION
FM OUT
TRACKING SHIFTER
SW PULSE OUT
IC3001 AN6310
AGC
AMP
DET
SYNC SEP
EMPHASIS CLIP
CLAMP
FM MOD
DEVIATION
FM FREQ
WHITE CLIP
DARK CLIP
Q3001 2SD636
Q3002 2SC2206
Q3003 2SB641
Q3004 2SC2206
Q3005 2SC2377
Q3006 2SC2206
Q3007 2SB641
Q3008 2SD638
Q3009 2SD638
Q3010 2SD638
IC3002 AN6320N
PEAK A
PEAK B
HEAD SW
MIX BAL
GAIN A
GAIN B
P002
VIDEO HEAD A (X)
VIDEO HEAD A (Y)
VIDEO HEAD B (X)
VIDEO HEAD B (Y)
IC3003 SN76670N
LIMITER
Q3013, Q3014 2SC2206×2
Q3015 2SB641
Q3016 2SD636
Q3017 2SC2206
Q3018 2SC2206
Q3019 2SD636
Q3020 2SB641
Q3021 2SC2206
Q3022 2SB641
Q3023 2SC2206
Q3024 2SC2206
Q3025 2SC2206
Q3026 2SC2206
Q3027 2SB641
Q3028 2SC2206
Q3029 2SD636
Q3030 2SC2206
Q3031 2SC2206
Q3032 2SC2377
FL3001 VLF0056
FL3002 VLF0112
FL3003 VLF0115
FL3004 VLF0117
DL3001 VLD0012
IC3004 AN6332
CLAMP
EE/VV SW
MIX
NOISE CANCELLER MIX
DROP OUT DETECTOR
GATE
HPF·AMP LIMITER
FM DEMOD
Y FB LEVEL
D3005 MA165
(TO CHROMINANCE SECTION) Ⓐ Ⓑ
TP3009 0.5V/5msec. div.
TP3010 P.B. mode 2V/10msec. div.
TP3011 Rec. mode 0.5V/20μsec. div.
TP3012 P.B. mode 0.1V/0.5μsec. div.
TP3013 P.B. mode 2V/20μsec. div.
TP3014 P.B. mode 1V/20μsec. div.
TP3015 P.B. mode 0.2V/5msec. div.
TP3016 P.B. mode 0.2V/5msec. div.
L
M
O
P
Q
R
S
T
U
V

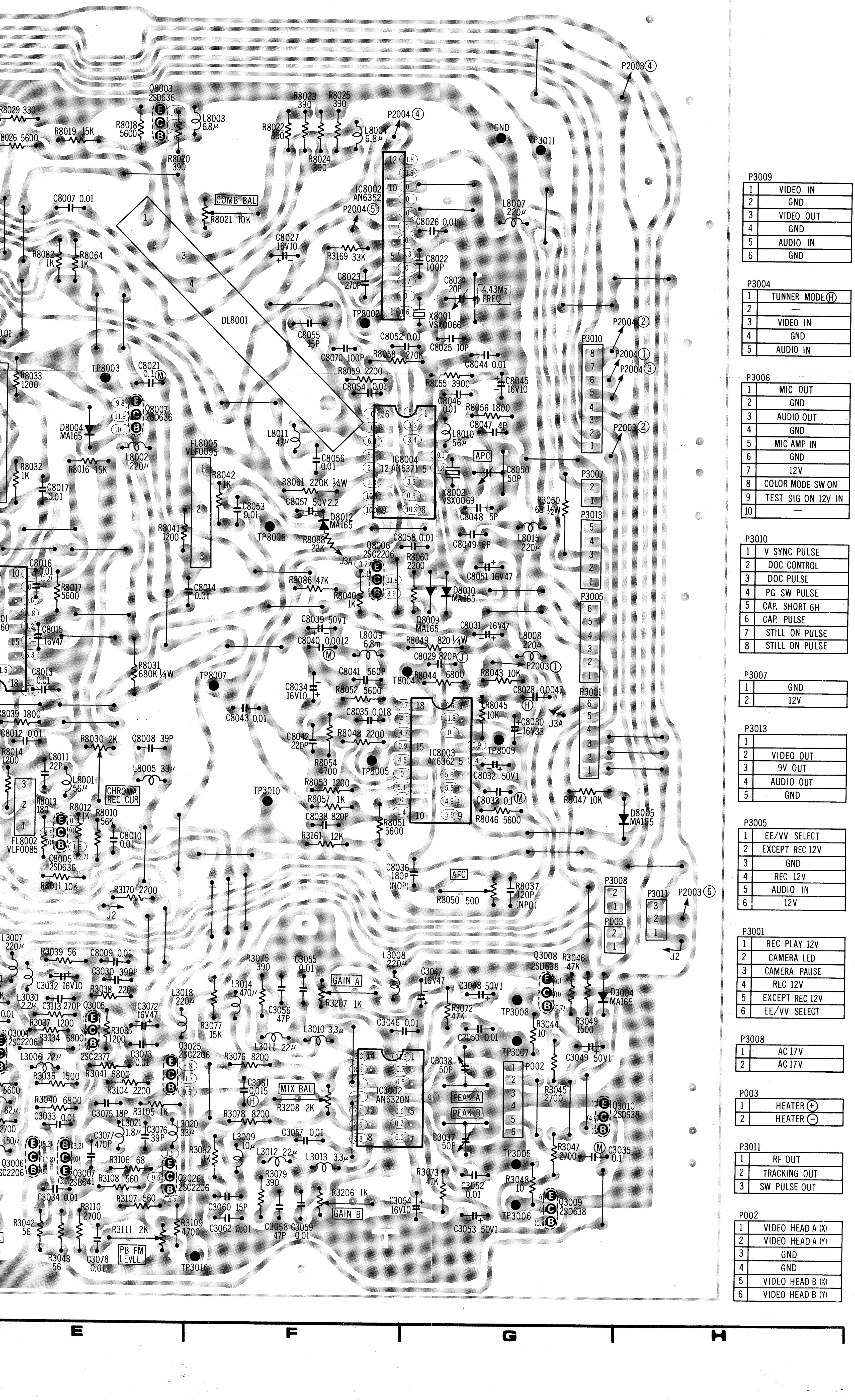
Luminance & Chrominance C.B.A.	
Q3001	D-1
Q3002	B-1
Q3003	D-2
Q3004	E-2
Q3005	E-2
Q3006	E-1
Q3007	E-1
Q3008	G-2
Q3009	G-1
Q3010	G-1
Q3013	B-2
Q3014	B-3
Q3015	B-3
Q3016	B-2
Q3017	B-3
Q3018	B-5
Q3019	B-5
Q3020	B-6
Q3021	D-3
Q3022	C-3
Q3023	C-2
Q3024	D-2
Q3025	E-2
Q3026	E-1
Q3027	B-3
Q3028	B-3
Q3029	B-5
Q3030	B-3
Q3031	B-2
Q3032	C-5
Q8001	D-6
Q8003	E-6
Q8004	D-6
Q8005	E-3
Q8006	F-4
Q8008	D-3
Q8009	D-4
Q8010	D-5
Q8011	D-6

LUMINANCE & CHROMINANCE CIRCUIT BOARD (VEP0392A)



1
2
3
4
5
6
A
B
C
D
E
VJB0392
IC3001 AN6310
IC3003 SN76670N
IC3004 AN6332
IC3005 μPD4069C
IC8001 AN6360
IC8005 AN6551
DL3001
FL3001 VLF0056
FL3002 VLF0112
FL3003 VLF0115
FL3004 VLF0117
FL8001 VLF0113
FL8002 VLF0085
FL8003 VLF0094
FL8004 VLF0090
J3001
J3002
J3003
J3004
S3001
P3004
P3006
P3009
P2003
J1
J2
J3
J4
TP3001
TP3002
TP3003
TP3004
TP3009
TP3012
TP3013
TP3014
TP3015
TP8001
TP8003
GND
Y.PB.LEVEL
H. FREQ
DEVIATION
FM FREQ
EE LEVEL
WHITE CLIP
DARK CLIP
REC FM LEVEL
DL BAL
LIMITER BAL
REC KILLER
CHROMA PB MIX
CHROMA REC CUR
PB LEV

Lumi



IC8002 AN6352
IC8004 AN6371
IC8003 AN6362
IC3002 AN6320N
DL8001
FL8005 VLF0095
FL8002 VLF0085
X8001 VSX0066
X8002 VSX0069
4.43Mz FREQ
COMB BAL
CHROMA REC CUR
APC
AFC
GAIN A
GAIN B
MIX BAL
PEAK A
PEAK B
PB FM LEVEL
TP8002
TP8003
TP8005
TP8007
TP8008
TP8009
TP3005
TP3006
TP3007
TP3008
TP3010
TP3011
TP3016
GND
P2003④
P2004④
P2004⑤
P2004②
P2004①
P2004③
P2003②
P2003①
P2003⑥
J2
J3A
P3010
P3007
P3013
P3005
P3001
P3008
P003
P3011
P002
E
F
G
H

P3009	
1	VIDEO IN
2	GND
3	VIDEO OUT
4	GND
5	AUDIO IN
6	GND

P3004	
1	TUNNER MODE Ⓗ
2	—
3	VIDEO IN
4	GND
5	AUDIO IN

P3006	
1	MIC OUT
2	GND
3	AUDIO OUT
4	GND
5	MIC AMP IN
6	GND
7	12V
8	COLOR MODE SW ON
9	TEST SIG ON 12V IN
10	—

P3010	
1	V SYNC PULSE
2	DOC CONTROL
3	DOC PULSE
4	PG SW PULSE
5	CAP. SHORT 6H
6	CAP. PULSE
7	STILL ON PULSE
8	STILL ON PULSE

P3007	
1	GND
2	12V

P3013	
1	
2	VIDEO OUT
3	9V OUT
4	AUDIO OUT
5	GND

P3005	
1	EE/VV SELECT
2	EXCEPT REC 12V
3	GND
4	REC 12V
5	AUDIO IN
6	12V

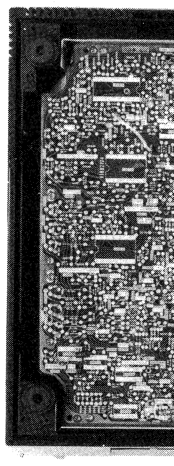
P3001	
1	REC PLAY 12V
2	CAMERA LED
3	CAMERA PAUSE
4	REC 12V
5	EXCEPT REC 12V
6	EE/VV SELECT

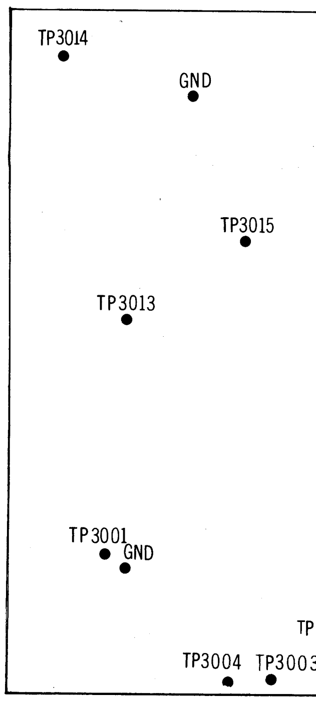
P3008	
1	AC17V
2	AC17V

P003	
1	HEATER ⊕
2	HEATER ⊖

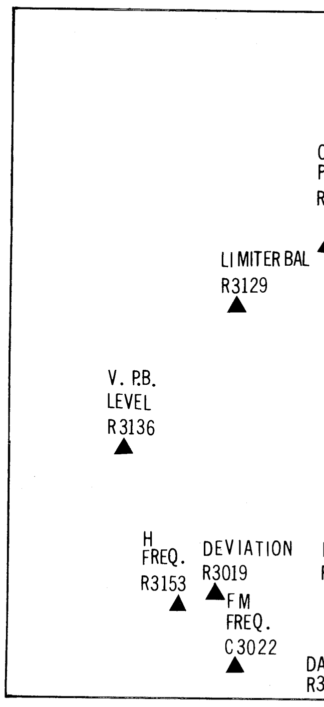
P3011	
1	RF OUT
2	TRACKING OUT
3	SW PULSE OUT

P002	
1	VIDEO HEAD A (X)
2	VIDEO HEAD A (Y)
3	GND
4	GND
5	VIDEO HEAD B (X)
6	VIDEO HEAD B (Y)





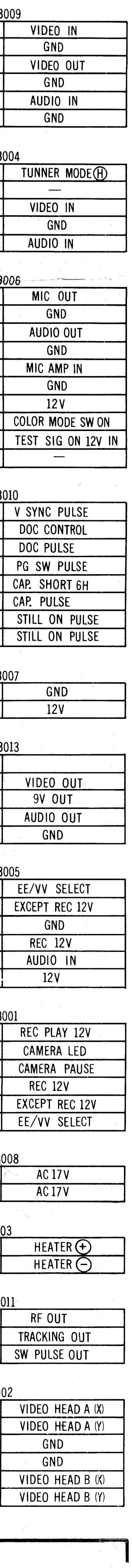
TP3014
GND
TP3015
TP3013
TP3001
GND
TP3004
TP3003
TP

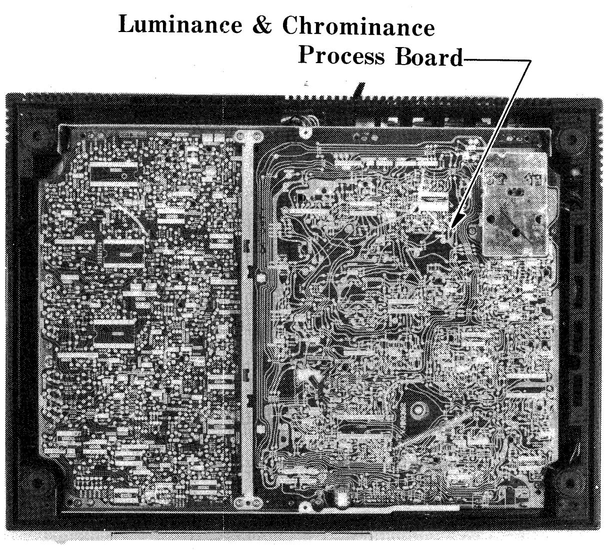


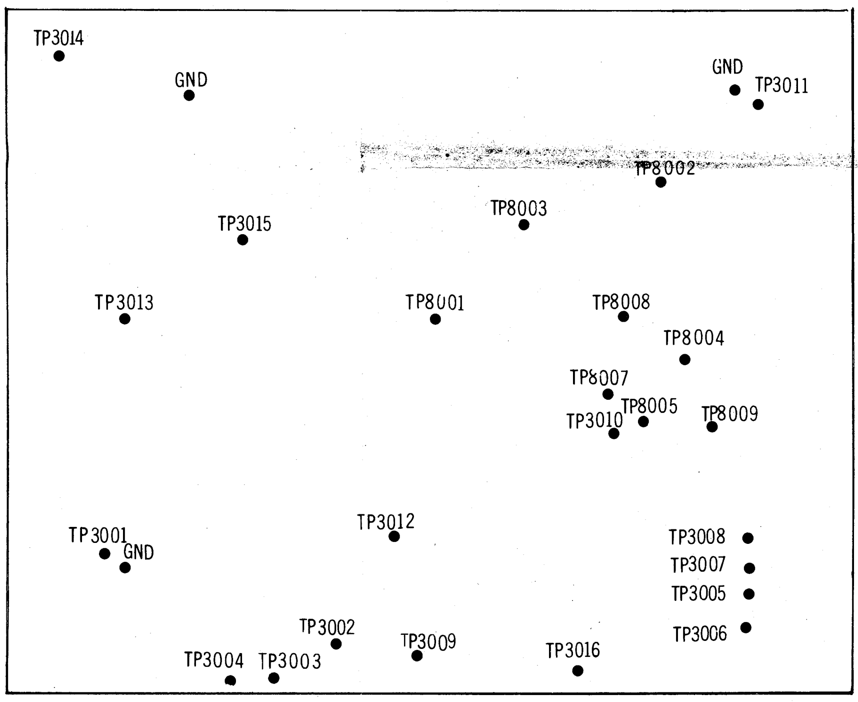
LIMITER BAL
R3129
V. P.B.
LEVEL
R3136
H
FREQ.
R3153
DEVIATION
R3019
FM
FREQ.
C3022
DA
R3

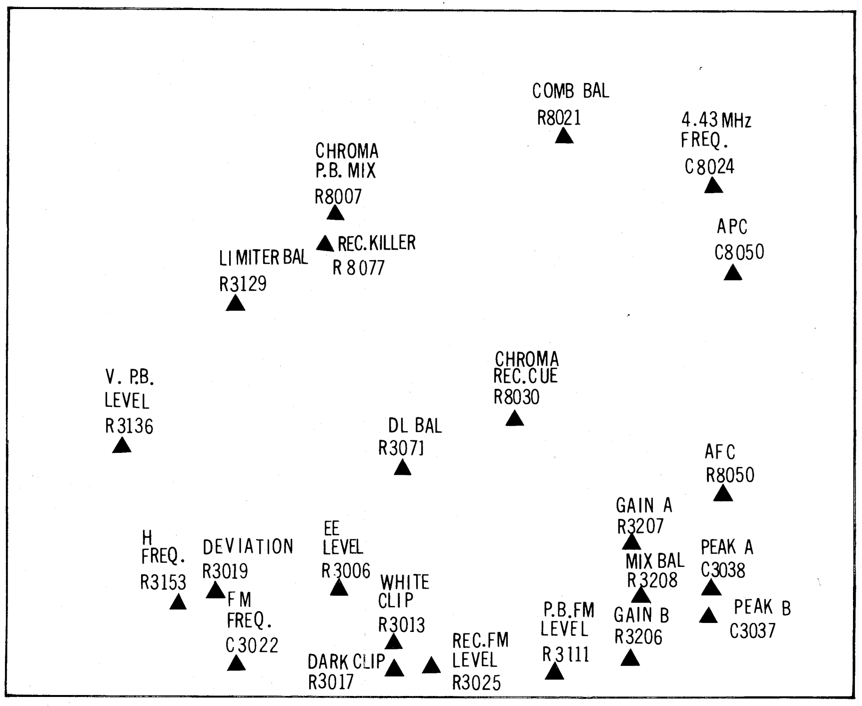
PIN NO.	SIG
1	PG SW
2	Vss
3	REC (H)
4	Tracking V
5	Tracking V
6	Tracking M

PIN NO.	SIGN
1	Still Advan
2	Still Pulse
3	Still Short
4	REF 25Hz
5	Pause Res


3009
VIDEO IN
GND
VIDEO OUT
GND
AUDIO IN
GND
3004
TUNNER MODE Ⓗ
—
VIDEO IN
GND
AUDIO IN
3006
MIC OUT
GND
AUDIO OUT
GND
MIC AMP IN
GND
12V
COLOR MODE SW ON
TEST SIG ON 12V IN
—
3010
V SYNC PULSE
DOC CONTROL
DOC PULSE
PG SW PULSE
CAP. SHORT 6H
CAP. PULSE
STILL ON PULSE
STILL ON PULSE
3007
GND
12V
3013
VIDEO OUT
9V OUT
AUDIO OUT
GND
3005
EE/VV SELECT
EXCEPT REC 12V
GND
REC 12V
AUDIO IN
12V
3001
REC PLAY 12V
CAMERA LED
CAMERA PAUSE
REC 12V
EXCEPT REC 12V
EE/VV SELECT
008
AC 17V
AC 17V
03
HEATER ⊕
HEATER ⊖
011
RF OUT
TRACKING OUT
SW PULSE OUT
02
VIDEO HEAD A (X)
VIDEO HEAD A (Y)
GND
GND
VIDEO HEAD B (X)
VIDEO HEAD B (Y)


Luminance & Chrominance
Process Board


TP3014
GND
GND
TP3011
TP8002
TP8003
TP3015
TP3013
TP8001
TP8008
TP8004
TP8007
TP8005
TP3010
TP8009
TP3001
GND
TP3012
TP3008
TP3007
TP3005
TP3006
TP3002
TP3009
TP3016
TP3004
TP3003


COMB BAL
R8021
4.43MHz
FREQ.
C8024
CHROMA
P.B. MIX
R8007
REC. KILLER
R 8077
APC
C8050
LIMITER BAL
R3129
V. P.B.
LEVEL
R3136
CHROMA
REC. CUE
R8030
DL BAL
R3071
AFC
R8050
GAIN A
R3207
H
FREQ.
R3153
DEVIATION
R3019
EE
LEVEL
R3006
WHITE
CLIP
R3013
MIX BAL
R3208
PEAK A
C3038
FM
FREQ.
C3022
P.B.FM
LEVEL
R3111
GAIN B
R3206
PEAK B
C3037
REC.FM
LEVEL
R3025
DARK CLIP
R3017

(Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	PG SW	P2003-1 Control & Sub System Control
2	Vss	P2003-2 Control & Sub System Control
3	REC (H)	P2003-3 Control & Sub System Control
4	Tracking VR	P2003-4 Control & Sub System Control
5	Tracking VR	P2003-5 Control & Sub System Control
6	Tracking MM OUT	P2003-6 Control & Sub System Control

(Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	Still Advance (H)	P2004-1 Control & Sub System Control
2	Still Pulse	P2004-2 Control & Sub System Control
3	Still Short 1/2 (H)	P2004-3 Control & Sub System Control
4	REF 25Hz	P2004-4 Control & Sub System Control
5	Pause Reset OUT	P2004-5 Control & Sub System Control

P3001 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	REC Play 12V	P6202-6 System Control II
2	Camera LED	P6503-4 Operation
3	Camera Pause	P6012-10 System Control I
4	REC 12V	P6202-7 System Control II
5	Except REC 12V	P6202-5 System Control II
6	EE/VV Select	P6202-4 System Control II

P3003 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	Heater	— PTC Heater
2	Heater	— PTC Heater

P3004 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	Tuner (H)	P702-1 TV Demodulator
2	—	— —
3	Video IN	P702-3 TV Demodulator
4	GND	— —
5	Audio IN	P702-5 TV Demodulator

P3005 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	EE/VV Select	P4004-1 Audio
2	Except REC 12V	P4004-3 Audio
3	GND	P4004-5 Audio
4	REC 12V	P4004-2 Audio
5	Audio IN	P4004-4 Audio
6	12V	P4004-6 Audio

P3006 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	MIC OUT	P4002-1 Audio
2	GND	— —
3	Audio OUT	P4002-3 Audio
4	GND	— —
5	Mic Amp IN	P4002-5 Audio
6	GND	— —
7	12V	P1506-3 Rear Jack
8	Color Mode SW ON	P1506-1 Rear Jack
9	Test Signal ON	P1506-2 Rear Jack
10	—	— —

P3007 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	GND	P1005-1 Power Supply
2	12V	P1004-1 Power Supply

P3008 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	AC 17V	P1006-1 Power Supply
2	AC 17V	P1006-2 Power Supply

P3009 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	Video IN	— —
2	GND	— —
3	Video OUT	P1504-1 Rear Jack
4	GND	— —
5	Audio IN	— —
6	GND	— —

P3010 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	V Sync. Pulse	P6702-1 Still
2	DOC Control	P6702-2 Still
3	DOC Pulse	P6702-3 Still
4	PG SW Pulse	P6702-4 Still
5	CAP. Short Brake	P6702-5 Still
6	CAP. Pulse Drive	P6702-6 Still
7	Still ON Pulse	P6702-7 Still
8	Still ON Pulse	P6005-1 System Control

P3011 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	FM OUT	P4008-3 Audio
2	Tracking OUT	P4008-1 Audio
3	SW Pulse OUT	P4008-2 Audio

P3013 (Luminance & Chrominance C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	—	— —
2	Video OUT	P1-3 RF Converter
3	9V OUT	P1-1 RF Converter
4	Audio OUT	P1-5 RF Converter
5	GND	— —

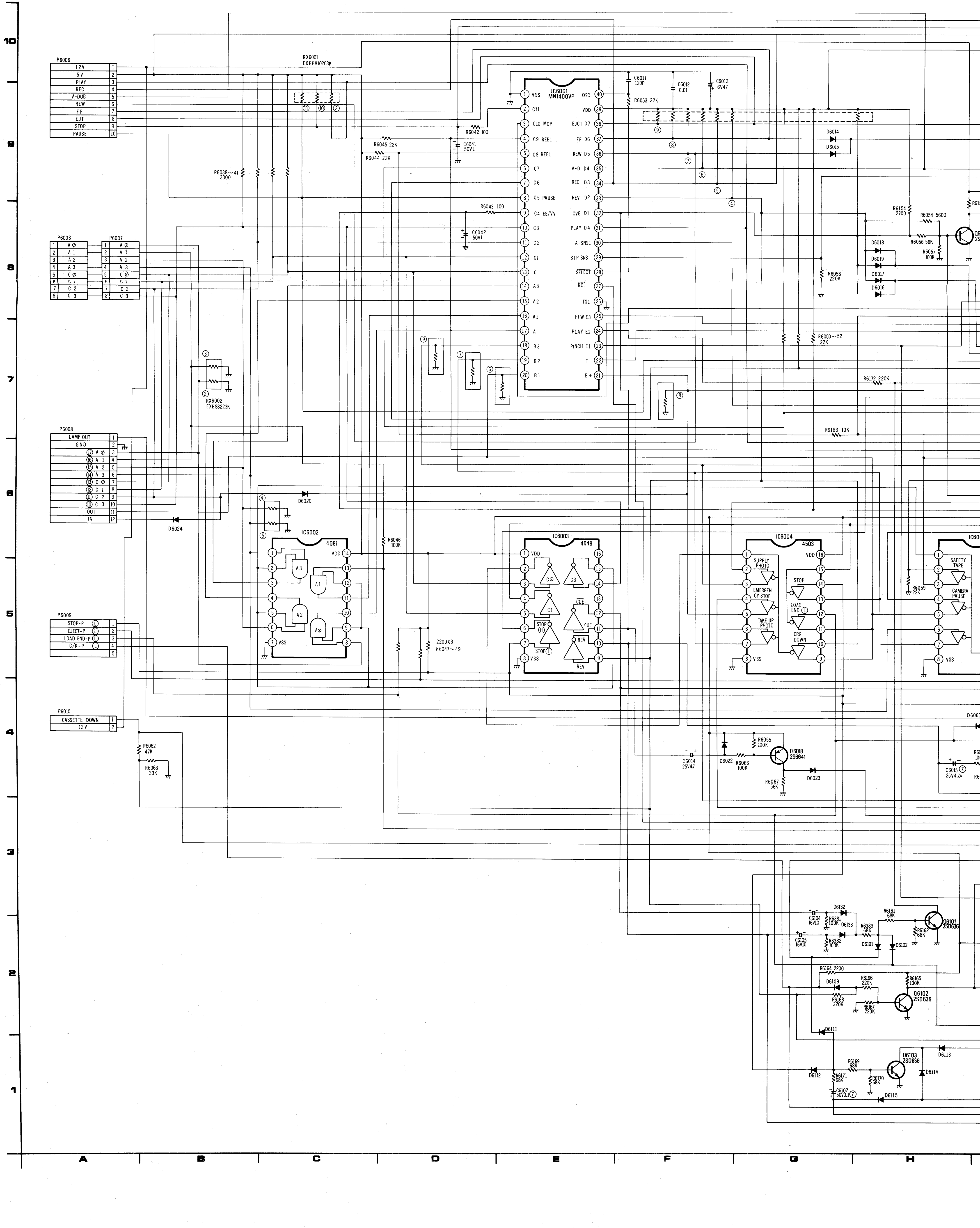
P6001 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	5V	P1003-3 Power Supply
2	Timer (L)	P1003-5 Power Supply
3	From Power SW	P1507-4 Power, Timer, NR, Select SW
4	GND	P1005-4 Power Supply
5	Timer Set	P1508-1 Power, Timer, NR, Select SW
6	Timer Set	P7502-1 Timer
7	Timer ON	P7502-2 Timer
8	REC Request	P7502-3 Timer

P6002 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Safety Tab	— Safety Tab SW
2	5V	— Safety Tab SW

P6004 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Loading (M) Vol.	P1516-1 TR
2	Loading (M) Nega	P1519-5 Pinch Sol
3	Loading (M) Posi	P1519-6 Pinch Sol

P6005 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Still ON Pulse	P3010-8 Luminance & Chrominance
2	1/2 ×9 (H)	P2002-2 Control & Sub System Control

SYSTEM CONTROL I SCHEMATIC DIAGRAM


P6006
12V
5V
PLAY
REC
A-DUB
REW
FF
EJT
STOP
PAUSE
RX6001
EXBP810203K
R6038~41 3300
R6045 22K
R6044 22K
R6042 100
C6041 50V1
R6043 100
C6042 50V1
IC6001
MN1400VP
VSS
C11
C10 MCP
C9 REEL
C8 REEL
C7
C6
C5 PAUSE
C4 EE/VV
C3
C2
C1
C
A3
A2
A1
A
B3
B2
B1
OSC
VDD
EJCT D7
FF D6
REW D5
A-D D4
REC D3
REV D2
CVE D1
PLAY D4
A-SNS1
STP SNS
SELECT
RC
TS1
FFW E3
PLAY E2
PINCH E1
E
B+
C6011 120P
C6012 0.01
C6013 6V47
R6053 22K
D6014
D6015
R6154 2700
R6054 5600
R6056 56K
R6057 100K
D6018
D6019
D6017
D6016
R6058 220K
R6050~52 22K
R6172 220K
R6183 10K
P6003
P6007
A Φ
A 1
A 2
A 3
C Φ
C 1
C 2
C 3
RX6002
EXB88223K
P6008
LAMP OUT
GND
OUT
IN
D6020
D6024
IC6002
4081
VDD
VSS
R6046 100K
2200X3
R6047~49
IC6003
4049
CΦ
C3
C1
CUE
STOP
REV
IC6004
4503
SUPPLY PHOTO
EMERGEN CY STOP
STOP
LOAD END
TAKE UP PHOTO
CRG DOWN
SAFETY TAPE
CAMERA PAUSE
R6059 22K
P6009
STOP-P
EJECT-P
LOAD END-P
C/R-P
P6010
CASSETTE DOWN
12V
R6062 47K
R6063 33K
C6014 25V47
D6022
R6066 100K
R6055 100K
Q6018 2SB641
R6067 56K
D6023
C6015 25V4.7μ
C6104 16V10
R6381 100K
D6132
D6133
R6383 68K
R6161 68K
Q6101 2SD636
R6162 68K
C6105 16V10
R6382 100K
D6101
D6102
R6164 2200
D6109
R6166 220K
R6165 100K
R6168 220K
R6167 220K
Q6102 2SD636
D6111
D6113
Q6103 2SD636
R6169 68K
D6112
R6171 68K
R6170 68K
D6114
C6102 50V0.1
D6115
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P6006 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	12V	P6501-1 Operation
2	5V	P6501-2 Operation
3	Play	P6501-3 Operation
4	REC	P6501-4 Operation
5	A-Dub	P6501-5 Operation
6	REW	P6501-6 Operation
7	F.F.	P6501-7 Operation
8	Eject	P6501-8 Operation
9	Stop	P6501-9 Operation
10	Pause	P6501-10 Operation

P6007 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Micon A0	P1511-2 Remocon Jack
2	Micon A1	P1511-8 Remocon Jack
3	Micon A2	P1511-5 Remocon Jack
4	Micon A3	P1511-1 Remocon Jack
5	Micon C0	P1511-7 Remocon Jack
6	Micon C1	P1511-3 Remocon Jack
7	Micon C2	P1511-4 Remocon Jack
8	Micon C3	P1511-6 Remocon Jack

P6008 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Lamp OUT	P6502-1 Operation
2	GND	P6502-2 Operation
3	Micon (17) A0	P6502-3 Operation
4	Micon (16) A1	P6502-4 Operation
5	Micon (15) A2	P6502-5 Operation
6	Micon (14) A3	P6502-6 Operation
7	Micon (13) C0	P6502-7 Operation
8	Micon (12) C1	P6502-8 Operation
9	Micon (11) C2	P6502-9 Operation
10	Micon (19) C3	P6502-10 Operation
11	Counter OUT	P1503-1 Memory SW
12	Counter IN	P1503-2 Memory SW

PI

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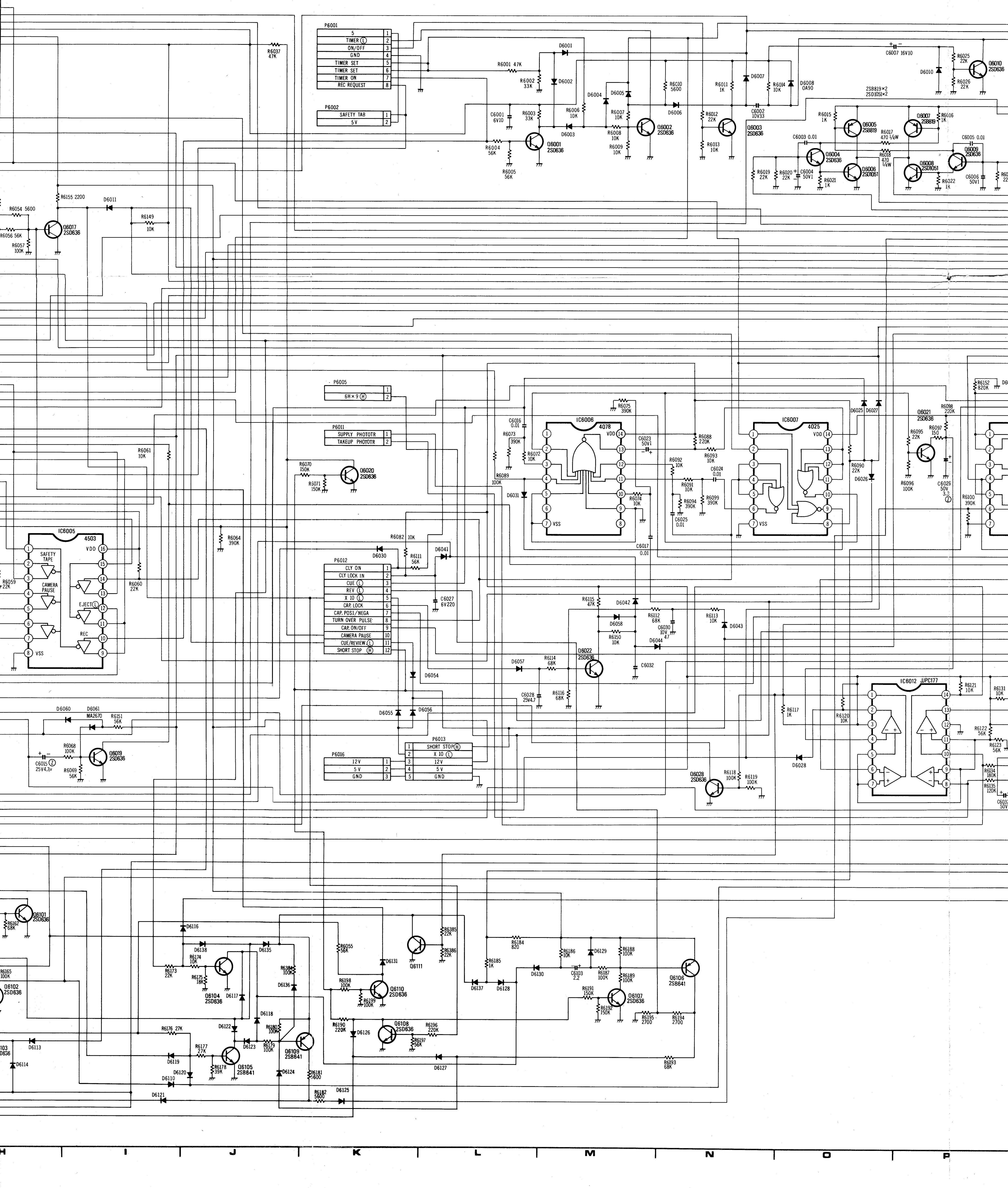

P6001
5
TIMER Ⓛ
ON/OFF
GND
TIMER SET
TIMER SET
TIMER ON
REC REQUEST
P6002
SAFETY TAB
5V
R6037 47K
R6001 47K
R6002 33K
R6003 33K
R6004 56K
R6005 56K
C6001 6V10
D6001
D6002
D6003
D6004
D6005
R6006 10K
R6007 10K
R6008 10K
R6009 10K
Q6001 2SD636
Q6002 2SD636
R6010 5600
D6006
R6011 1K
R6012 22K
R6013 10K
Q6003 2SD636
D6007
R6014 10K
D6008 OA90
C6002 10V33
C6007 16V10
D6010
R6025 22K
R6026 22K
Q6010 2SD636
2SB819×2
2SD1051×2
R6015 1K
R6016 1K
Q6005 2SB819
Q6007 2SB819
R6017 470 1/4W
R6018 470 1/4W
C6003 0.01
C6005 0.01
Q6004 2SD636
Q6006 2SD1051
Q6008 2SD1051
Q6009 2SD636
R6019 22K
R6020 22K
C6004 50V1
R6021 1K
R6022 1K
C6006 50V1
R6155 2200
D6011
R6149 10K
R6054 5600
R6056 56K
R6057 100K
Q6017 2SD636
P6005
6H×9 Ⓗ
P6011
SUPPLY PHOTOTR
TAKEUP PHOTOTR
R6070 150K
R6071 150K
Q6020 2SD636
R6061 10K
R6064 390K
IC6005
4503
SAFETY TAPE
CAMERA PAUSE
EJECT Ⓛ
REC
VDD
VSS
R6059 22K
R6060 22K
D6060
D6061 MA2670
R6151 56K
R6068 100K
R6069 56K
C6015 Ⓩ 25V4.7μ
Q6019 2SD636
P6012
CLY ON
CLY LOCK IN
CUE Ⓛ
REV Ⓛ
X 10 Ⓛ
CAP. LOCK
CAP. POS1/NEGA
TURN OVER PULSE
CAP. ON/OFF
CAMERA PAUSE
CUE/REVIEW Ⓛ
SHORT STOP Ⓗ
D6030
R6082 10K
R6111 56K
D6041
C6027 6V220
D6054
D6055
D6056
P6013
SHORT STOP Ⓗ
X 10 Ⓛ
12V
5V
GND
P6016
12V
5V
GND
IC6006
4078
C6016 0.01
R6073 390K
R6072 10K
R6089 100K
D6031
R6075 390K
C6023 50V1
R6074 10K
C6017 0.01
R6088 220K
R6093 10K
R6092 10K
R6091 10K
R6094 390K
R6099 390K
C6024 0.01
C6025 0.01
IC6007
4025
D6025
D6027
R6090 22K
D6026
Q6021 2SD636
R6095 22K
R6096 100K
R6097 150
R6098 220K
C6026 50V 3.3 Ⓩ
R6152 820K
R6100 390K
R6115 47K
D6042
D6058
R6150 10K
R6112 68K
C6030 10V 47
D6044
R6113 10K
D6043
C6032
D6057
R6114 68K
Q6022 2SD636
C6028 25V4.7
R6116 68K
D6028
Q6028 2SD636
R6118 100K
R6119 100K
R6117 1K
R6120 10K
IC6012 μPC177
R6121 10K
R6131 10K
R6122 56K
R6123 56K
R6134 180K
R6135 120K
C6037 50V
Q6101 2SD636
R6162 68K
R6165 100K
Q6102 2SD636
Q6103 2SD636
D6113
D6114
D6116
D6138
D6135
R6173 22K
R6174 10K
R6175 18K
Q6104 2SD636
D6117
D6118
D6122
D6123
R6176 27K
R6177 27K
R6178 39K
Q6105 2SB641
D6119
D6120
D6110
D6121
R6384 100K
D6136
R6180 100K
R6179 100K
Q6109 2SB641
D6124
R6181 5600
R6182 5600
D6125
R6055 56K
D6131
R6198 100K
R6199 100K
Q6110 2SD636
Q6111
R6385 22K
R6386 22K
R6190 220K
D6126
Q6108 2SD636
R6196 220K
R6197 56K
D6127
R6184 820
R6185 1K
D6137
D6128
D6130
R6186 10K
C6103 2.2
D6129
R6187 100K
R6188 100K
R6189 100K
R6191 150K
R6192 150K
Q6107 2SD636
R6195 2700
R6194 2700
Q6106 2SB641
R6193 68K
H
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INATION
Jack
Jack
Jack
Jack
Jack
Jack
Jack
Jack

P6008 (System Control I C.B.A)

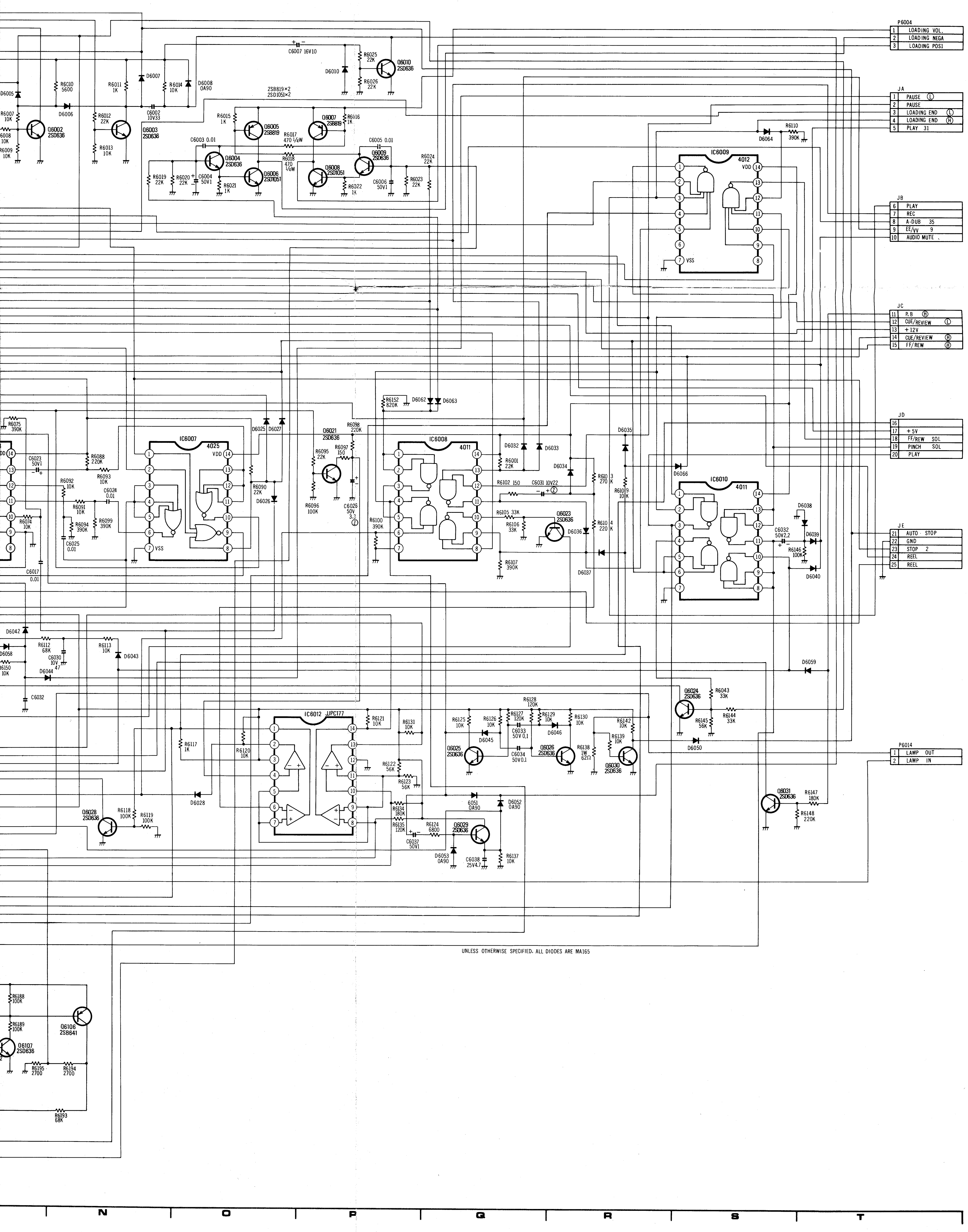
PIN NO.	SIGNAL NAME	DESTINATION
1	Lamp OUT	P6502-1 Operation
2	GND	P6502-2 Operation
3	Micon (17) A0	P6502-3 Operation
4	Micon (16) A1	P6502-4 Operation
5	Micon (15) A2	P6502-5 Operation
6	Micon (14) A3	P6502-6 Operation
7	Micon (13) C0	P6502-7 Operation
8	Micon (12) C1	P6502-8 Operation
9	Micon (11) C2	P6502-9 Operation
10	Micon (19) C3	P6502-10 Operation
11	Counter OUT	P1503-1 Memory SW
12	Counter IN	P1503-2 Memory SW

P6009 (System Control I C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION
1	Stop (L)	S6501 Mode Select
2	Eject (L)	S6501 Mode Select
3	Loading End (L)	S6501 Mode Select
4	C/R Position (L)	S6501 Mode Select
5	—	— —

P6010 (System Control I C.B.A)

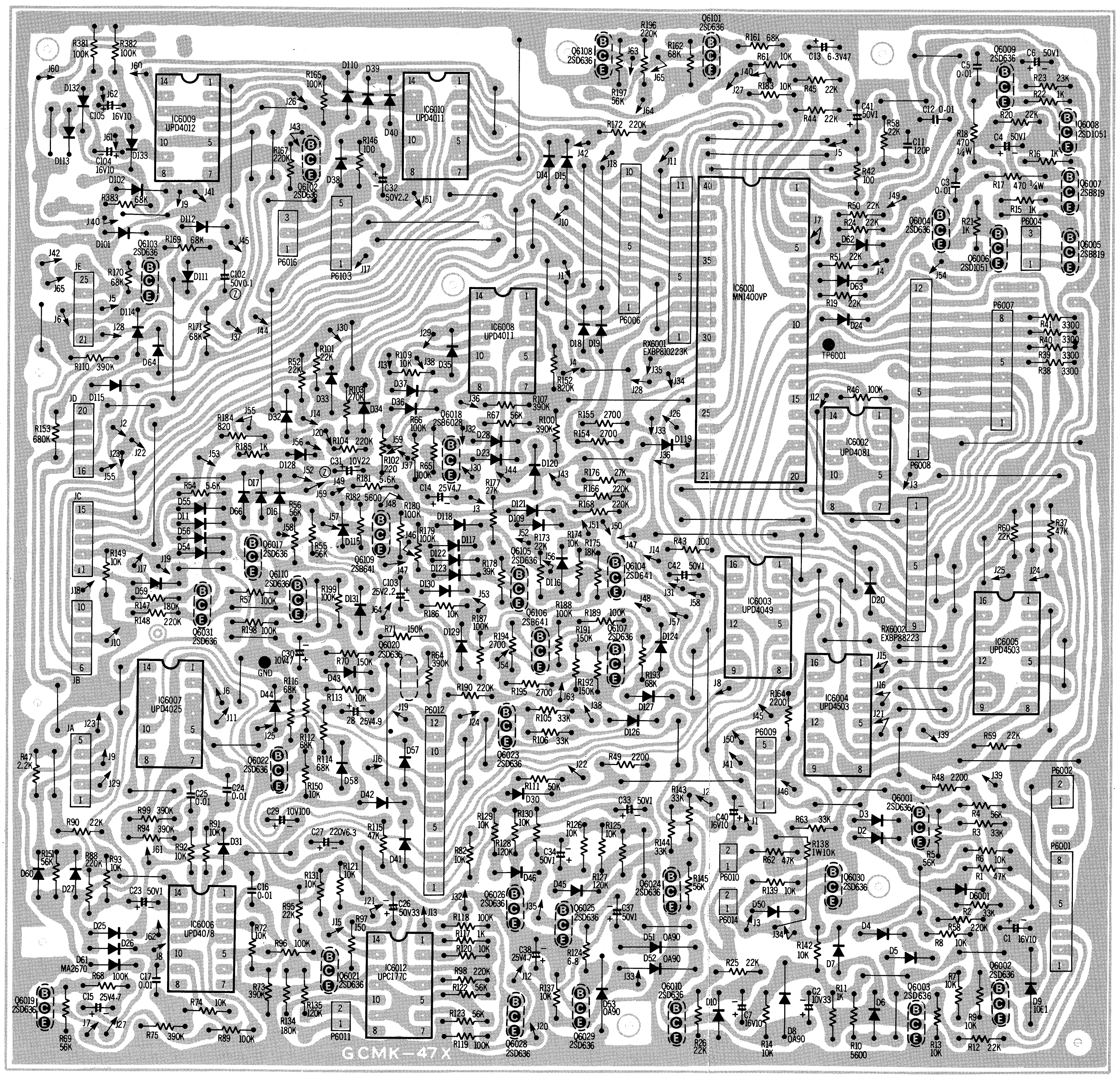
PIN NO.	SIGNAL NAME	DESTINATION
1	Cassette Down	S1503 Cassette Tab SW
2	12V	S1503 Cassette Tab SW



P6004
1 LOADING VOL.
2 LOADING NEGA
3 LOADING POSI
JA
1 PAUSE Ⓛ
2 PAUSE
3 LOADING END Ⓛ
4 LOADING END Ⓗ
5 PLAY 31
JB
6 PLAY
7 REC
8 A-DUB 35
9 EE/VV 9
10 AUDIO MUTE
JC
11 P.B Ⓗ
12 CUE/REVIEW Ⓛ
13 +12V
14 CUE/REVIEW Ⓗ
15 FF/REW Ⓗ
JD
16
17 +5V
18 FF/REW SOL
19 PINCH SOL
20 PLAY
JE
21 AUTO STOP
22 GND
23 STOP 2
24 REEL
25 REEL
P6014
1 LAMP OUT
2 LAMP IN
IC6007 4025
IC6008 4011
IC6009 4012
IC6010 4011
IC6012 UPC177
Q6002 2SD636
Q6003 2SD636
Q6004 2SD636
Q6005 2SB819
Q6006 2SD1051
Q6007 2SB819
Q6008 2SD1051
Q6009 2SD636
Q6010 2SD636
2SB819×2
2SD1051×2
Q6021 2SD636
Q6023 2SD636
Q6024 2SD636
Q6025 2SD636
Q6026 2SD636
Q6028 2SD636
Q6029 2SD636
Q6030 2SD636
Q6031 2SD636
Q6106 2SB641
Q6107 2SD636
N
O
P
Q
R
S
T

UNLESS OTHERWISE SPECIFIED, ALL DIODES ARE MA165

SYSTEM CONTROL I CIRCUIT BOARD (VEP06108A)



NOTE: REF. NO6001～UP UNLESS OTHER WISE SPECIFIED, ALL DIODES ARE MA165

P6012

1	CLY.ON
2	CLY.LOCK IN
3	CUE
4	REVIEW
5	X10
6	CAP. LOCK
7	CAP. POSI/NEGA
8	TURNOVER PULSE
9	CAP. ON/OFF
10	CAMERA PAUSE
11	CUE/REVIEW
12	SHORT STOP

P6009

1	STOP
2	EJECT
3	LOADING END
4	CPR POSLTION
5	

P6001

1	5V
2	TIMER
3	FROM POWER SW
4	GND
5	TIMER SET
6	TIMER SET
7	TIMER ON
8	REC REQUEST

P6008

1	LAMP OUT
2	GND
3	MICON Aφ
4	MICON A1
5	MICON A2
6	MICON A3
7	MICON Cφ
8	MICON C1
9	MICON C2
10	MICON C3
11	COUNTER OUT
12	COUNTER IN

P6007

1	MICON Aφ
2	MICON A1
3	MICON A2
4	MICON A3
5	MICON Cφ
6	MICON C1
7	MICON C2
8	MICON C3

P6016

1	12V
2	5V
3	GND

P6010

1	CASSETTE DOWN
2	12V

P6002

1	SAFETY TAB
2	5V

P6005

1	
2	6H X9

P6011

1	SUPPLY PHOTO TR
2	TAKEUP PHOTO TR

P6016

1	12V
2	5V
3	GND

JA

1	PAUSE
2	PAUSE
3	LOADING END
4	LOADING END
5	PLAY IC6001-(31)

JB

6	PLAY
7	REC
8	A·DUB IC6001-(35)
9	E-E/V-V IC6001-⑨
10	AUDIO MUTE

JC

11	P·B
12	CUE/REVIEW
13	+12V
14	CUE/REVIEW
15	FF/REW

JD

16	
17	+5V
18	FF/REW SOL
19	PRESSURE ROLLER SOL.
20	PLAY

JE

21	AUTO STOP
22	GND
23	STOP IC6001-②
24	REEL
25	REEL

P6004

1	LOADING VOL.
2	LOADING NEGA
3	LOADING POS1

P6013

1	SHORT STOP
2	X9
3	12V
4	5V
5	GND

P6006

1	12V
2	5V
3	PLAY
4	REC
5	A-DUB
6	REW
7	F·F
8	EJECT
9	STOP
10	PAUSE

P6013

1	SHORT STOP
2	X9
3	12V
4	5V
5	GND

P6014

1	LAMP OUT
2	LAMP IN

P6011 (System Control I C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Supply Photo TR	P4009-5	Audio
2	Take Up Photo TR	P1514-1	Pinch Sol

P6012 (System Control I C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	CYL ON	P2006-7	Control & Sub System
2	CYL Lock IN	P2006-9	Control & Sub System
3	CUE (L)	P2006-6	Control & Sub System
4	Review (L)	P2006-5	Control & Sub System
5	×9 (L)	P2002-5	Control & Sub System
6	CAP Lock	P2006-4	Control & Sub System
7	CAP Posi/Nega	P2006-1	Control & Sub System
8	Turnover Pulse	P2006-2	Control & Sub System
9	CAP ON/OFF	P2006-3	Control & Sub System
10	Camera Pause	P3001-3	Luminance & Chromina
11	—	—	—
12	Pinch OFF (H)	P2002-3	Control & Sub System

SYSTEM CONTROL I TRANSISTORS DC VOLTAGE CHART

TRANSISTOR REF. NO. / MODE	Q6001			Q6002			Q6003			Q6004		
	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0	4.96	0.01	0.31	13.25	0.01	0.73	0.05	0.01	0.04	8.61
REC	0.02	0.01	4.95	0.02	0.29	13.22	0.02	0.74	0.06	0.02	0.05	8.67
PLAY	0.01	0.01	4.95	0.02	0.29	13.21	0.02	0.73	0.05	0.02	0.05	8.65
CUE	0.02	0.01	4.94	0.02	0.30	13.20	0.02	0.74	0.06	0.03	0.06	5.54
REV	0.02	0.01	4.94	0.02	0.30	13.20	0.02	0.74	0.06	0.03	0.06	5.54
REW	0.01	0.01	4.95	0.02	0.31	13.21	0.02	0.73	0.06	0.02	0.05	8.63
F.F.	0.02	0.01	4.95	0.02	0.31	13.22	0.02	0.74	0.06	0.02	0.05	8.62

TRANSISTOR REF. NO. / MODE	Q6007			Q6008			Q6009			Q6010		
	E	B	C	E	B	C	E	B	C	E	B	C
STOP	8.61	8.61	0.13	0.01	0.01	—	0.01	0.04	8.61	0.01	0.01	3.45
REC	8.68	8.67	—	0.02	0.02	—	0.02	0.05	8.67	0.02	0.02	3.44
PLAY	8.65	8.65	0.24	0.02	0.02	—	0.02	0.05	8.65	0.02	0.02	3.44
CUE	5.54	5.54	0.32	0.03	0.03	0.32	0.03	0.15	5.53	0.03	0.03	3.44
REV	5.54	5.53	—	0.03	0.03	—	0.03	0.15	5.54	0.03	0.03	3.44
REW	8.63	8.63	—	0.02	0.02	—	0.02	0.05	8.62	0.02	0.02	3.45
F.F.	8.62	8.62	—	0.02	0.02	—	0.02	0.05	8.62	4.02	0.02	3.45

TRANSISTOR REF. NO. / MODE	Q6019			Q6020			Q6021			Q6022		
	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0.01	0.05	0.01	0.63	0.07	0.01	0.01	4.85	0.01	0.62	0.02
REC	0.02	0.03	2.75	0.02	0.03	0.02	0.02	0.02	4.84	0.02	0.60	0.09
PLAY	0.02	0.02	2.74	0.02	0.03	0.02	0.02	4.85	4.84	0.02	0.60	0.08
CUE	0.03	0.46	0.07	0.03	0.04	0.03	0.03	0.03	4.84	0.03	0.62	0.07
REV	0.03	0.37	2.76	0.03	0.04	0.03	0.03	0.03	4.84	0.03	0.61	0.10
REW	0.02	0.02	2.78	0.02	0.64	0.08	0.02	0.02	4.86	0.02	0.63	0.04
F.F.	0.02	0.02	0.06	0.02	0.64	0.08	0.02	0.02	4.84	0.02	0.63	0.04

TRANSISTOR REF. NO. / MODE	Q6025			Q6026			Q6027			Q6028		
	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0.29	0	0.01	0.29	0	—	—	—	0.01	0.09	0.02
REC	0.02	0.29	0	0.02	0.29	0	—	—	—	0.02	0.10	0.03
PLAY	0.02	0.30	0	0.02	0.03	0	—	—	—	0.02	0.10	0.03
CUE	0.03	0.30	0	0.03	0.29	0	—	—	—	0.03	0.11	0.04
REV	0.03	0.30	0	0.03	0.29	0	—	—	—	0.03	0.11	0.04
REW	0.02	0.29	0	0.02	0.29	0	—	—	—	0.02	0.10	0.03
F.F.	0.02	0.29	0	0.02	0.29	0	—	—	—	0.02	0.10	0.03

TRANSISTOR REF. NO. / MODE	Q6031			Q6101			Q6102			Q6103		
	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0.07	5.83	0.01	0.01	0.06	0.01	0.14	4.92	0.01	0.01	4.65
REC	0.02	0.28	5.84	0.02	0.02	4.79	0.02	0.16	4.91	0.02	0.02	0.64
PLAY	0.02	0.28	5.83	0.02	0.02	4.79	0.02	0.15	—	0.02	0.02	0.60
CUE	0.03	0.29	0.68	0.03	0.03	0.08	0.03	0.15	4.90	0.03	0.03	4.64
REV	0.03	0.29	0.78	0.03	0.03	0.07	0.03	0.28	4.90	0.03	0.03	4.64
REW	0.02	0.08	5.84	0.02	0.02	0.07	0.02	0.16	4.90	0.02	0.02	4.65
F.F.	0.02	0.08	5.84	0.02	0.02	0.07	0.02	0.16	4.91	0.02	0.02	4.65

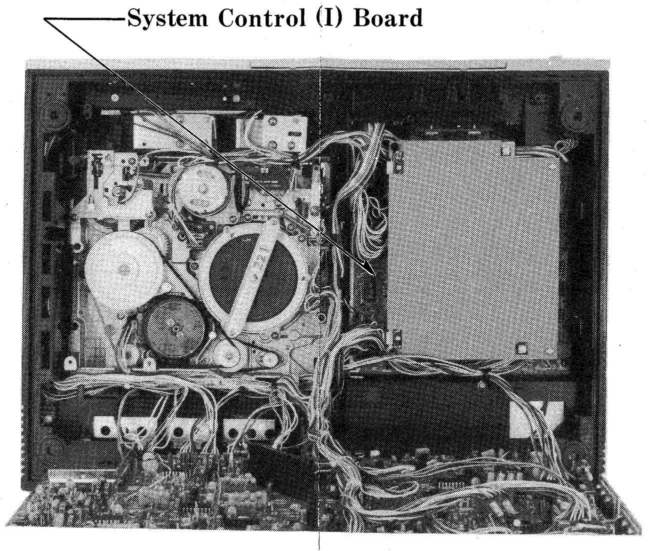
TRANSISTOR REF. NO. / MODE	Q6106			Q6107			Q6108			Q6109		
	E	B	C	E	B	C	E	B	C	E	B	C
STOP	11.83	11.71	—	0.01	0.01	11.60	0.01	0.6	0.02	4.96	4.91	−0.22
REC	11.86	11.74	—	0.02	0.02	11.63	0.02	0.6	0.02	4.95	4.90	—
PLAY	11.82	11.71	—	0.02	0.02	11.59	0.02	0.6	0.02	4.95	4.90	—
CUE	11.82	11.70	—	0.03	0.03	11.59	0.02	0.04	0.07	4.95	4.30	4.87
REV	11.81	11.70	—	0.03	0.03	11.58	0.02	0.04	0.07	4.95	4.30	4.88
REW	11.83	11.70	—	0.02	0.02	11.59	0.02	0.6	0.02	4.95	4.91	—
F.F	11.82	11.70	—	0.02	0.02	11.59	0.02	0.6	0.02	4.95	4.91	−0.29

P6011 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Supply Photo TR	P4009-5 Audio
2	Take Up Photo TR	P1514-1 Pinch Sol

P6012 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	CYL ON	P2006-7 Control & Sub System Control
2	CYL Lock IN	P2006-9 Control & Sub System Control
3	CUE (L)	P2006-6 Control & Sub System Control
4	Review (L)	P2006-5 Control & Sub System Control
5	×9 (L)	P2002-5 Control & Sub System Control
6	CAP Lock	P2006-4 Control & Sub System Control
7	CAP Posi/Nega	P2006-1 Control & Sub System Control
8	Turnover Pulse	P2006-2 Control & Sub System Control
9	CAP ON/OFF	P2006-3 Control & Sub System Control
10	Camera Pause	P3001-3 Luminance & Chrominance
11	—	— —
12	Pinch OFF (H)	P2002-3 Control & Sub System Control

P6013 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Short Stop (H)	P6701-1 Still
2	×9 (L)	P6701-4 Still
3	12V	P6701-8 Still
4	5V	P6701-9 Still
5	GND	P6701-10 Still

P6014 (System Control I C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Lamp OUT	PL6551 Sensor Lamp
2	Lamp IN	PL6551 Sensor Lamp



System Control (I) C.B.A.							
Q6001	E-2	D6034	C-4	Q6109	C-3	D6101	B-5
Q6002	E-1	D6035	C-4	Q6110	B-3	D6102	B-5
Q6003	E-1	D6036	C-4	Q6111	A-5	D6109	C-3
Q6004	E-5	D6037	C-4			D6110	C-5
Q6005	F-4	D6038	C-5	D6001	E-2	D6111	B-4
Q6006	E-4	D6039	C-5	D6002	E-2	D6112	B-5
Q6007	F-5	D6040	C-5	D6003	E-2	D6113	B-4
Q6008	F-5	D6041	C-2	D6004	E-2	D6114	B-4
Q6009	E-5	D6042	C-2	D6005	E-1	D6115	B-4
Q6010	D-1	D6043	C-3	D6006	E-1	D6116	D-3
Q6017	B-3	D6044	B-3	D6007	E-2	D6117	C-3
Q6018	C-4	D6045	D-2	D6008	D-1	D6118	C-3
Q6019	A-1	D6046	C-2	D6010	D-1	D6119	D-4
Q6020	C-3	D6050	D-2	D6011	B-3	D6120	C-4
Q6021	C-1	D6051	D-2	D6014	C-5	D6121	C-3
Q6022	B-2	D6052	D-1	D6015	D-5	D6122	C-3
Q6023	C-2	D6053	D-1	D6016	B-3	D6123	C-3
Q6024	D-2	D6054	B-3	D6017	B-3	D6124	D-3
Q6025	D-2	D6055	B-3	D6018	D-4	D6125	C-3
Q6026	C-2	D6056	B-3	D6019	D-4	D6126	D-2
Q6028	C-1	D6057	C-2	D6020	E-3	D6127	D-3
Q6029	D-1	D6058	C-2	D6022	C-4	D6128	B-4
Q6030	E-2	D6059	B-3	D6023	C-4	D6129	C-3
Q6031	B-3	D6060	A-2	D6024	E-4	D6130	C-3
Q6101	D-5	D6061	B-1	D6025	B-2	D6131	C-3
Q6102	B-5	D6062	E-4	D6026	B-2	D6132	B-5
Q6103	B-4	D6063	E-4	D6027	A-2	D6133	B-5
Q6104	D-3	D6064	B-4	D6028	C-4	D6135	A-5
Q6105	C-3	D6066	B-3	D6030	C-2	D6136	B-5
Q6106	C-3	D6067	C-1	D6031	B-2	D6137	A-5
Q6107	D-3	D6068	C-1	D6032	B-4	D6138	A-5
Q6108	D-5	D6069	C-2	D6033	C-4		

EM CONTROL I TRANSISTORS DC VOLTAGE CHART

RANSISTOR REF. NO.	Q6001			Q6002			Q6003			Q6004			Q6005			Q6006		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
OP	0.01	0	4.96	0.01	0.31	13.25	0.01	0.73	0.05	0.01	0.04	8.61	8.61	8.61	0.13	0.01	0.01	0.13
C	0.02	0.01	4.95	0.02	0.29	13.22	0.02	0.74	0.06	0.02	0.05	8.67	8.67	8.67	—	0.02	0.02	—
AY	0.01	0.01	4.95	0.02	0.29	13.21	0.02	0.73	0.05	0.02	0.05	8.65	8.65	8.65	0.24	0.02	0.02	0.18
E	0.02	0.01	4.94	0.02	0.30	13.20	0.02	0.74	0.06	0.03	0.06	5.54	5.54	5.54	0.31	0.03	0.03	0.12
V	0.02	0.01	4.94	0.02	0.30	13.20	0.02	0.74	0.06	0.03	0.06	5.54	5.53	5.53	—	0.03	0.03	—
W	0.01	0.01	4.95	0.02	0.31	13.21	0.02	0.73	0.06	0.02	0.05	8.63	8.63	8.63	—	0.02	0.02	0.29
.	0.02	0.01	4.95	0.02	0.31	13.22	0.02	0.74	0.06	0.02	0.05	8.62	8.62	8.62	—	0.02	0.02	—

RANSISTOR REF. NO.	Q6007			Q6008			Q6009			Q6010			Q6017			Q6018		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
OP	8.61	8.61	0.13	0.01	0.01	—	0.01	0.04	8.61	0.01	0.01	3.45	0.01	0.19	9.87	4.96	4.90	0.01
C	8.68	8.67	—	0.02	0.02	—	0.02	0.05	8.67	0.02	0.02	3.44	0.02	0.20	9.89	4.95	4.90	0.02
AY	8.65	8.65	0.24	0.02	0.02	—	0.02	0.05	8.65	0.02	0.02	3.44	0.02	0.20	9.86	4.95	4.89	0.02
E	5.54	5.54	0.32	0.03	0.03	0.32	0.03	0.15	5.53	0.03	0.03	3.44	0.03	0.71	0.14	4.95	4.89	0.03
V	5.54	5.53	—	0.03	0.03	—	0.03	0.15	5.54	0.03	0.03	3.44	0.03	0.70	0.16	4.95	4.88	0.03
W	8.63	8.63	—	0.02	0.02	—	0.02	0.05	8.62	0.02	0.02	3.45	0.02	0.21	9.87	4.95	4.90	0.02
.	8.62	8.62	—	0.02	0.02	—	0.02	0.05	8.62	4.02	0.02	3.45	0.02	0.20	9.87	4.96	—	0.02

ANSISTOR REF. NO.	Q6019			Q6020			Q6021			Q6022			Q6023			Q6024		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
OP	0.01	0.01	0.05	0.01	0.63	0.07	0.01	0.01	4.85	0.01	0.62	0.02	0.01	0.65	0.03	0.01	0.70	0.06
C	0.02	0.03	2.75	0.02	0.03	0.02	0.02	0.02	4.84	0.02	0.60	0.09	0.02	0.66	0.04	0.02	0.03	11.80
AY	0.02	0.02	2.74	0.02	0.03	0.02	0.02	4.85	4.84	0.02	0.60	0.08	0.02	0.66	0.04	0.02	0.03	11.79
E	0.03	0.46	0.07	0.03	0.04	0.03	0.03	0.03	4.84	0.03	0.62	0.07	0.03	0.66	0.05	0.03	0.04	11.78
/	0.03	0.37	2.76	0.03	0.04	0.03	0.03	0.03	4.84	0.03	0.61	0.10	0.03	0.03	4.92	0.03	0.04	11.76
W	0.02	0.02	2.78	0.02	0.64	0.08	0.02	0.02	4.86	0.02	0.63	0.04	0.02	0.65	0.04	0.02	0.71	0.07
	0.02	0.02	0.06	0.02	0.64	0.08	0.02	0.02	4.84	0.02	0.63	0.04	0.02	0.65	0.04	0.02	0.71	0.07

ANSISTOR REF. NO.	Q6025			Q6026			Q6027			Q6028			Q6029			Q6030		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
OP	0.01	0.29	0	0.01	0.29	0	—	—	—	0.01	0.09	0.02	3.44	0	4.97	0.01	0.69	0.02
C	0.02	0.29	0	0.02	0.29	0	—	—	—	0.02	0.10	0.03	3.44	0	4.97	0.02	0.70	0.03
AY	0.02	0.30	0	0.02	0.03	0	—	—	—	0.02	0.10	0.03	3.44	2.04	4.97	0.02	0.70	0.03
E	0.03	0.30	0	0.03	0.29	0	—	—	—	0.03	0.11	0.04	3.43	0	4.96	0.03	0.71	0.03
/	0.03	0.30	0	0.03	0.29	0	—	—	—	0.03	0.11	0.04	3.43	0	4.96	0.03	0.71	0.04
W	0.02	0.29	0	0.02	0.29	0	—	—	—	0.02	0.10	0.03	3.44	0	4.97	0.02	0.70	0.03
	0.02	0.29	0	0.02	0.29	0	—	—	—	0.02	0.10	0.03	3.44	0	4.97	0.07	0.70	0.03

ANSISTOR REF. NO.	Q6031			Q6101			Q6102			Q6103			Q6104			Q6105		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
P	0.01	0.07	5.83	0.01	0.01	0.06	0.01	0.14	4.92	0.01	0.01	4.65	0.01	0.02	11.51	0.01	0.13	4.60
	0.02	0.28	5.84	0.02	0.02	4.79	0.02	0.16	4.91	0.02	0.02	0.64	0.02	0.03	11.54	0.02	0.14	4.60
Y	0.02	0.28	5.83	0.02	0.02	4.79	0.02	0.15	—	0.02	0.02	0.60	0.02	0.03	11.50	0.02	0.14	4.59
	0.03	0.29	0.68	0.03	0.03	0.08	0.03	0.15	4.90	0.03	0.03	4.64	0.03	0.73	0.20	0.03	0.15	—
	0.03	0.29	0.78	0.03	0.03	0.07	0.03	0.28	4.90	0.03	0.03	4.64	0.03	0.72	0.17	0.03	0.68	0.10
/	0.02	0.08	5.84	0.02	0.02	0.07	0.02	0.16	4.90	0.02	0.02	4.65	0.02	0.03	11.51	0.02	0.14	4.61
	0.02	0.08	5.84	0.02	0.02	0.07	0.02	0.16	4.91	0.02	0.02	4.65	0.02	0.03	11.51	0.02	0.14	4.61

NSISTOR REF. NO.	Q6106			Q6107			Q6108			Q6109			Q6110			Q6111		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
P	11.83	11.71	—	0.01	0.01	11.60	0.01	0.6	0.02	4.96	4.91	−0.22	0.01	0.60	0.02	0	0.08	8.8
	11.86	11.74	—	0.02	0.02	11.63	0.02	0.6	0.02	4.95	4.90	—	0.02	0.03	0.31	0.02	0.09	8.8
Y	11.82	11.71	—	0.02	0.02	11.59	0.02	0.6	0.02	4.95	4.90	—	0.02	0.03	0.31	0.02	0.09	8.7
	11.82	11.70	—	0.03	0.03	11.59	0.02	0.04	0.07	4.95	4.30	4.87	0.03	0.04	0.32	0.02	0.10	3.98
	11.81	11.70	—	0.03	0.03	11.58	0.02	0.04	0.07	4.95	4.30	4.88	0.03	0.04	1.19	0.02	0.10	4.0
/	11.83	11.70	—	0.02	0.02	11.59	0.02	0.6	0.02	4.95	4.91	—	0.02	0.61	0.03	0.02	0.09	8.7
	11.82	11.70	—	0.02	0.02	11.59	0.02	0.6	0.02	4.95	4.91	−0.29	0.02	0.61	0.03	0.02	0.09	8.7

SYSTEM CONTROL I ICS DC VOLTAGE CHART

IC REF. NO. / MODE	IC6001							
	1	2	3	4	5	6	7	8
STOP	0.01	4.22	0.03	0.06	0.06	0.06	0.06	0.25
REC	0.02	0.16	0.04	4.07	0.07	0.08	0.08	0.27
PLAY	0.02	0.16	0.04	4.07	0.07	0.07	0.08	0.28
CUE	0.03	0.16	0.05	0.08	4.08	0.08	0.08	0.29
REV	0.03	0.17	0.05	4.07	0.08	0.08	0.09	0.29
REW	0.02	0.16	0.04	4.07	0.07	0.08	0.08	0.27
F.F.	0.02	0.16	0.04	0.07	4.10	0.08	0.08	0.27
	9	10	11	12	13	14	15	16
STOP	0.10	−0.05	−0.18	−0.05	0.37	0.02	0.02	0.02
REC	4.31	−0.04	−0.17	−0.04	−0.04	0.03	0.03	0.03
PLAY	4.30	−0.04	−0.18	−0.04	−0.04	0.03	0.03	0.03
CUE	4.29	−0.02	−0.09	−0.27	−0.02	0.04	−0.35	0.04
REV	4.30	−0.02	−0.09	−0.25	−0.02	−0.33	−0.04	0.04
REW	0.11	−0.04	−0.10	−0.04	−0.04	0.03	0.03	0.03
F.F.	0.11	−0.04	−0.18	−0.04	−0.04	0.03	0.03	0.03
	17	18	19	20	21	22	23	24
STOP	0.02	−0.26	0.01	3.79	0.01	0.06	0.06	0.06
REC	0.03	−0.25	−0.25	—	−0.25	0.07	4.89	4.90
PLAY	0.03	−0.25	−0.25	—	−0.25	0.07	4.89	4.89
CUE	0.04	0.55	0.55	0.58	−0.23	0.07	4.89	0.08
REV	0.04	0.52	0.52	0.58	0.68	4.87	4.89	0.08
REW	0.03	−0.25	0.03	0.78	0.03	0.07	0.07	0.07
F.F.	0.03	−0.25	0.03	0.56	0.03	0.07	0.07	—
	25	26	27	28	29	30	31	32
STOP	0.06	0.01	3.45	4.97	0.05	0	0.20	0.30
REC	0.07	0.02	3.44	4.95	0.06	0	4.48	0.31
PLAY	0.07	0.02	3.44	4.95	0.06	0	4.48	0.31
CUE	4.89	0.03	3.44	4.95	0.06	0	4.43	4.14
REV	4.90	0.03	3.44	4.95	0.06	0	4.42	0.32
REW	4.89	0.02	3.45	4.95	0.06	0	0.22	0.32
F.F.	4.90	0.02	3.45	4.96	0.06	0	0.21	0.31
	33	34	35	36	37	38	39	40
STOP	0.30	0.19	0.27	0.19	0.18	0.18	4.97	1.67
REC	0.31	3.97	0.28	0.20	0.19	0.19	4.96	1.68
PLAY	0.31	0.22	0.28	0.20	0.19	0.19	4.95	1.67
CUE	0.32	0.22	0.28	0.20	0.20	0.20	4.95	1.68
REV	4.05	0.22	0.28	0.20	0.19	0.20	4.95	1.68
REW	0.32	0.21	0.28	1.92	0.57	0.20	4.95	1.67
F.F.	0.31	0.20	0.28	0.20	4.89	0.19	4.96	1.68

SYSTEM CONTROL I ICS DC VOLTAGE CHART

IC REF. NO. / MODE	IC6002															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
STOP	0.02	4.78	0.02	0.02	4.78	0.02	0.01	0.02	4.78	0.02	0.02	4.78	0.02	4.96		
REC	0.03	4.78	0.03	0.03	4.78	0.03	0.02	0.03	4.78	0.03	0.03	4.78	0.03	4.96		
PLAY	0.03	4.77	0.03	0.03	4.78	0.03	0.02	0.03	4.78	0.03	0.03	4.77	0.03	4.95		
CUE	0.04	4.78	0.04	−0.35	4.78	−0.35	0.03	0.04	—	0.04	0.04	4.78	0.04	4.95		
REV	−0.33	4.78	−0.33	0.04	4.78	—	0.03	0.04	4.78	0.04	0.04	4.78	0.04	4.95		
REW	0.03	4.78	0.03	0.03	4.78	0.03	0.02	0.03	4.78	0.03	0.03	4.78	0.03	4.96		
F.F.	0.03	4.78	0.03	0.03	4.78	0.03	0.02	0.03	4.78	0.03	0.03	4.78	0.03	4.95		

IC REF. NO. / MODE	IC6003															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STOP	4.97	1.51	0.37	4.79	−0.05	4.94	0	0.01	0.30	4.96	0.30	4.95	—	−0.05	4.79	—
REC	4.95	4.77	−0.04	4.78	−0.04	0.04	4.96	0.02	0.31	4.95	0.31	4.94	—	−0.04	4.78	—
PLAY	4.95	4.78	−0.04	4.77	−0.04	0.04	4.96	0.02	0.31	4.95	0.31	4.94	—	−0.04	4.77	0
CUE	4.95	4.78	−0.02	4.43	−0.27	0.04	4.96	0.03	0.32	4.95	4.14	0.04	0	−0.02	4.78	0
REV	4.95	4.78	−0.02	4.46	−0.25	0.04	4.96	0.03	4.05	0.04	0.32	4.93	—	−0.02	4.78	—
REW	4.96	4.77	−0.04	4.78	−0.04	4.92	0	0.02	0.32	4.95	0.32	4.94	0	−0.04	4.17	0
F.F.	4.96	4.78	−0.04	4.77	−0.04	4.93	0	0.02	0.31	4.95	0.31	4.94	—	−0.04	4.78	—

IC REF. NO. / MODE	IC6004															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STOP	−0.38	0.05	−0.26	0.07	0.01	0.05	0.01	0.01	3.79	4.88	3.79	4.70	0.01	0	4.79	4.96
REC	4.78	0.07	−0.25	0.02	−0.25	0.07	−0.25	0.02	—	4.90	—	−0.01	−0.25	4.96	4.78	4.96
PLAY	4.78	0.06	−0.25	0.02	−0.25	−0.07	−0.25	0.02	—	4.88	—	0	−0.25	4.96	4.77	4.95
CUE	4.78	0.07	0.55	0.03	−0.23	0.08	0.55	0.02	0.58	4.88	0.58	0.83	0.55	4.96	4.43	4.95
REV	4.78	0.07	0.52	0.03	0.68	0.08	0.52	0.02	0.58	4.88	0.58	0.73	0.52	4.96	4.46	4.94
REW	4.78	0.06	−0.25	0.08	0.03	0.07	0.03	0.02	0.78	4.88	0.78	4.69	0.03	0	4.78	4.95
F.F.	4.77	0.06	−0.25	0.08	0.03	0.06	0.03	0.02	0.56	4.88	0.56	4.70	0.03	0	4.78	4.96

IC REF. NO. / MODE	IC6005															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STOP	4.78	0	0.01	4.95	3.78	0.02	0.01	0.01	−0.26	0	−0.26	4.97	0.01	0.58	4.78	4.97
REC	4.78	4.96	−0.25	4.94	—	0.03	−0.25	0.02	−0.25	0	−0.25	4.96	−0.25	0.57	4.77	4.96
PLAY	4.77	4.96	−0.25	4.94	—	0.03	−0.25	0.02	−0.25	0	−0.25	4.96	−0.25	0.57	4.77	4.96
CUE	4.78	4.97	−0.23	4.93	0.58	0.04	0.55	0.02	0.55	0.01	0.55	4.96	−0.23	0.58	4.43	4.96
REV	4.78	4.96	0.68	4.93	0.58	−0.33	0.52	0.02	0.52	0.01	0.52	4.96	0.68	4.94	4.46	4.95
REW	4.78	0.01	0.03	4.94	0.78	0.03	0.03	0.02	−0.25	0	−0.25	4.96	0.03	0.58	4.78	4.96
F.F.	4.77	0.01	0.03	4.94	0.56	0.03	0.03	0.02	−0.25	0	−0.25	4.96	0.03	0.57	4.78	4.96

IC REF. NO. / MODE	IC6006															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
STOP	—	0.01	0.01	0.03	0.01	—	0.01	—	0.01	0.01	0.01	0.01	4.96	4.96		
REC	—	0.02	0.02	0.04	0.02	—	0.02	—	0.02	0.02	0.02	0.02	4.95	4.95		
PLAY	—	0.02	0.02	0.04	0.02	—	0.02	—	0.02	0.02	0.02	0.02	4.95	4.95		
CUE	0	0.03	0.03	0.05	0.03	—	0.03	—	0.03	0.03	0.02	0.02	4.94	4.95		
REV	—	0.03	0.03	0.05	0.03	−0.02	0.03	0	0.03	0.03	0.02	0.03	4.94	4.94		
REW	—	0.02	0.02	0.04	0.02	—	0.02	—	0.02	0.02	0.02	0.02	4.95	4.95		
F.F.	—	0.02	0.02	0.04	—	—	0.02	—	0.02	0.02	0.02	0.02	4.95	4.96		

IC REF. NO. / MODE	IC6007															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
STOP	4.21	0.18	0.58	0.58	0.58	4.96	0.01	0.75	0.04	0.06	4.85	4.85	4.85	4.96		
REC	0.25	0.19	0.57	0.57	0.57	4.95	0.02	4.86	0.02	0.02	4.85	4.85	4.85	4.95		
PLAY	0.25	0.19	0.57	0.57	0.57	4.95	0.02	4.85	0.02	0.02	4.84	4.84	4.84	4.95		
CUE	0.26	0.20	0.58	0.58	0.58	4.95	0.03	0.58	4.95	0.03	4.84	4.84	4.84	4.95		
REV	0.25	0.20	4.95	4.95	4.95	0.03	0.03	0.59	4.95	0.03	4.84	4.83	4.84	4.94		
REW	0.25	0.20	0.58	0.58	0.58	4.95	0.02	0.77	4.96	0.02	4.84	4.84	4.85	4.95		
F.F.	0.25	0.19	0.57	0.57	0.57	4.95	0.02	0.77	4.95	4.02	4.84	4.84	4.84	4.96		

IC REF. NO. / MODE	IC6008													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
STOP	0.01	0.01	4.96	4.96	4.96	0.01	0.01	0.06	4.53	4.88	4.95	0.25	0.67	4.96
REC	0.02	0.02	4.95	4.95	4.95	0.02	0.02	0.07	4.52	4.87	4.94	0.27	4.42	4.95
PLAY	0.02	0.02	4.95	4.95	4.95	0.02	0.02	0.07	4.52	4.87	4.94	0.28	0.75	4.95
CUE	0.03	0.03	4.95	4.94	4.95	0.03	0.03	0.08	4.52	4.86	4.94	0.29	0.76	4.95
REV	0.03	0.03	4.95	4.94	4.94	0.03	0.03	4.87	4.52	0.03	4.94	0.29	0.76	4.95
REW	0.02	0.02	4.95	0.95	4.96	0.02	0.02	0.07	4.53	4.87	4.95	0.27	0.68	4.95
F.F.	0.02	0.02	4.95	4.95	4.96	0.02	0.02	0.07	4.52	4.87	4.95	0.27	0.69	4.95

IC REF. NO. / MODE	IC6009													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
STOP	4.96	0.06	4.46	4.92	4.53	—	0.01	—	0.06	4.53	4.96	4.45	4.96	4.96
REC	0.05	4.90	4.25	4.91	4.52	—	0.02	—	0.07	4.52	4.95	4.25	4.95	4.95
PLAY	0.05	4.89	4.24	4.90	4.52	—	0.02	—	0.07	4.53	4.95	2.24	4.95	4.95
CUE	0.06	4.89	4.25	4.90	4.52	0	0.03	0	4.89	4.52	4.95	4.24	0.06	4.95
REV	0.06	4.89	4.24	4.90	4.52	—	0.03	—	4.89	4.52	4.95	4.24	0.06	4.95
REW	4.95	0.07	4.45	4.91	4.52	—	0.02	—	4.89	4.53	4.95	4.45	0.05	4.95
F.F.	4.96	0.07	4.44	4.90	4.52	—	0.02	—	4.90	4.52	4.96	4.44	0.05	4.94

IC REF. NO. / MODE	IC6010													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
STOP	0.06	4.96	4.96	4.91	0.20	0.20	0.01	0.01	0.01	4.92	0.01	4.96	4.96	4.96
REC	4.79	4.96	0.07	0.02	4.48	4.48	0.02	4.95	4.96	0.04	4.96	0.05	0.05	4.95
PLAY	4.79	4.95	0.07	0.02	4.48	4.48	0.02	4.95	4.95	0.04	4.95	0.05	0.05	4.95
CUE	0.08	4.95	4.95	0.03	4.42	4.42	0.03	4.95	0	0.05	4.95	0.06	0.06	4.95
REV	0.07	4.94	4.95	0.03	4.42	4.42	0.03	4.94	4.94	0.05	4.95	0.06	0.06	4.95
REW	0.07	4.95	4.95	4.90	0.22	0.22	0.02	0.02	0.02	4.91	0.02	4.95	4.95	4.95
F.F.	0.07	4.96	4.95	4.90	0.21	0.21	0.02	0.02	0.02	4.91	0.02	4.96	4.95	4.95

IC REF. NO. / MODE	IC6012													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
STOP	0.18	0.05	4.97	4.86	2.49	4.72	2.49	4.66	2.49	4.71	2.49	0.01	0.05	0.05
REC	0.19	0.07	4.96	4.86	2.49	4.80	2.49	4.83	2.49	4.84	2.49	0.02	0.07	0.07
PLAY	0.19	0.07	4.97	4.85	2.49	4.69	2.49	4.84	2.49	4.85	2.49	0.02	0.07	0.07
CUE	0.20	0.08	4.96	4.85	2.49	4.80	2.49	4.79	2.49	4.86	2.49	0.07	0.07	0.08
REV	0.20	0.08	4.96	4.84	2.49	4.70	2.49	4.80	2.49	4.86	2.49	0.03	0.07	0.08
REW	0.19	0.07	4.97	4.87	2.49	4.81	2.49	4.66	2.49	4.73	2.49	0.02	0.06	0.07
F.F.	0.18	0.07	4.96	4.86	2.49	4.71	2.45	4.70	2.49	4.75	—	0.02	0.06	0.06

SYSTEM CONTROL II TRANSISTORS DC VOLTAGE CHART

TRANSISTOR REF. NO. / MODE	Q6201			Q6203			Q6204			Q6205			Q6206			Q6207		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0.16	11.84	0.01	0.22	9.32	0.01	0.71	0.11	0.01	0.66	0.11	0.01	0.1	11.82	11.84	11.82	0.45
REC	0.02	0.18	11.86	0.02	0.24	9.33	0.02	0.01	11.71	0.03	0.67	0.16	0.03	0.74	0.12	11.86	11.15	11.83
PLAY	0.02	0.19	11.83	0.02	0.24	9.30	0.02	0.01	11.68	0.02	0.09	10.73	0.02	0.12	11.81	11.82	11.81	0.44
CUE	0.03	0.20	11.82	0.03	0.25	9.30	0.03	0.43	11.68	0.04	0.10	10.72	0.04	0.13	11.80	11.82	11.81	0.44
REV	0.03	0.20	11.82	0.03	0.25	9.30	0.03	0.38	11.68	0.04	0.10	10.72	0.04	0.13	11.80	11.82	11.81	0.44
REW	0.02	0.18	11.83	0.02	0.24	9.31	0.02	0.72	0.13	0.02	0.67	0.13	0.02	0.12	11.82	11.83	11.82	0.45
F.F.	0.02	0.18	11.83	0.02	0.24	9.31	0.02	0.73	0.13	0.02	0.68	0.13	0.02	0.11	11.81	11.83	11.82	0.45

TRANSISTOR REF. NO. / MODE	Q6208			Q6209			Q6210			Q6211			Q6212			Q6214		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0.74	0.06	11.84	11.08	11.73	0.01	0.15	11.76	11.83	11.77	0	0.01	0.02	11.88	0.01	0.08	11.37
REC	0.03	0.38	11.85	11.86	11.85	0.08	0.02	0.73	0.09	11.86	11.15	11.84	0.03	0.67	0.09	0.02	0.66	0.14
PLAY	0.02	0.75	0.08	11.82	11.08	11.72	0.02	0.16	11.76	11.82	11.75	0	0.02	0.04	11.86	0.02	0.65	0.13
CUE	0.04	0.76	0.09	11.82	11.07	11.71	0.03	0.17	11.75	11.82	11.75	0	0.04	0.05	11.86	0.03	0.67	0.14
REV	0.04	0.76	0.09	11.81	11.07	11.71	0.03	0.17	11.75	11.82	11.75	0	0.04	0.05	11.86	0.03	0.67	0.14
REW	0.02	0.75	0.08	11.83	11.08	11.72	0.02	0.16	11.76	11.83	11.76	0	0.02	0.04	11.87	0.02	0.09	11.36
F.F.	0.02	0.76	0.08	11.82	11.07	11.72	0.02	0.16	11.76	11.83	11.76	0	0.02	0.03	11.87	0.02	0.09	11.36

TRANSISTOR REF. NO. / MODE	Q6215			Q6216			Q6217			Q6218			Q6219			Q6220		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0.66	0.08	11.84	11.15	11.80	0	0.40	11.68	11.73	11.65	0.01	0.01	0.14	11.81	11.84	11.80	0.01
REC	0.02	0.08	11.75	11.87	11.74	—	0.02	0.08	0.08	0.08	0.08	0.02	0.03	0.15	11.83	11.90	11.79	0.02
PLAY	0.02	0.08	11.72	11.84	11.71	−0.28	0.02	0.08	11.68	11.72	11.64	0.02	0.02	0.16	11.80	11.82	11.76	0.02
CUE	0.03	0.09	11.72	11.83	11.70	−0.30	0.03	0.65	0.14	11.71	11.01	11.68	0.04	0.16	11.79	11.82	11.75	0.03
REV	0.03	0.09	11.71	11.83	11.71	−0.27	0.03	0.65	0.14	11.71	11.01	11.68	0.04	0.16	11.79	11.82	11.75	0.03
REW	0.02	0.67	0.09	11.84	11.15	11.80	0.02	0.41	11.68	11.72	11.64	0.02	0.02	0.15	11.80	11.83	11.76	0.02
F.F.	0.02	0.68	0.09	11.84	11.13	11.80	0.02	0.42	11.68	11.72	11.64	0.02	0.02	0.15	11.80	11.83	11.76	0.02

TRANSISTOR REF. NO. / MODE	Q6221			Q6222			Q6223			Q6224			Q6225			Q6226		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0.07	10.96	0.01	0.01	10.95	0.01	0.03	9.22	0.01	0.67	0.02	0.01	0.60	0.02	0.01	0.04	10.96
REC	0.03	0.69	0.18	0.03	0.03	2.19	0.03	0.05	8.51	0.03	0.69	0.04	0.03	0.61	0.03	0.03	0.05	2.19
PLAY	0.02	0.69	0.18	0.02	0.03	2.18	0.02	0.05	8.49	0.02	0.68	0.03	0.02	0.61	0.03	0.02	0.03	2.18
CUE	0.04	0.35	3.07	0.04	0.04	3.07	0.04	0.73	0.08	0.04	0.06	11.75	0.04	0.05	2.95	0.04	0.69	0.08
REV	0.04	0.35	3.07	0.04	0.04	3.07	0.04	0.73	0.08	0.04	0.06	11.75	0.04	0.05	2.96	0.04	0.69	0.09
REW	0.02	0.09	9.53	0.02	0.65	6.43	0.02	0.05	8.72	0.02	0.68	0.03	0.02	0.61	0.03	0.02	0.05	9.52
F.F.	0.02	0.08	11.06	0.02	0.03	11.05	0.02	0.04	9.32	0.02	0.69	0.03	0.02	0.62	0.03	0.02	0.05	11.06

TRANSISTOR REF. NO. / MODE	Q6227			Q6228			Q6229			Q6230			Q6231			Q6232		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0	10.96	9.24	8.68	9.24	9.26	9.26	9.27	0.01	0.06	9.25	4.96	4.95	0.01	0.01	0.01	22.00
REC	0.03	0.02	2.19	2.80	2.25	2.76	2.75	2.05	2.69	0.03	0.72	0.06	4.96	4.95	0.03	0.03	0.03	21.05
PLAY	0.02	0.02	2.18	2.76	2.22	2.73	2.72	2.03	2.68	0.02	0.71	0.06	4.95	4.94	0.03	0.03	0.03	20.89
CUE	0.04	0.69	0.08	3.23	3.08	3.06	3.07	2.34	2.96	0.04	0.73	0.07	4.95	4.25	4.88	0.04	1.44	0.75
REV	0.04	0.69	0.08	3.24	3.10	3.06	3.07	2.34	2.95	0.04	0.73	0.07	4.94	4.25	4.88	0.04	1.42	0.74
REW	0.02	0.02	9.53	9.77	9.20	9.75	9.77	9.04	9.73	0.02	0.75	0.10	4.95	4.26	4.88	0.03	1.42	0.73
F.F.	0.02	0.02	11.06	10.39	9.82	10.39	10.31	9.58	10.28	0.02	0.75	0.10	4.95	4.26	4.88	0.03	1.41	0.73

TRANSISTOR REF. NO. / MODE	Q6233			Q6234			Q6235			Q6236			Q6237			Q6238		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
STOP	4.96	4.96	0.01	0.01	0.01	22.00	4.96	4.95	0.01	0.01	0.10	22.00	22.00	22.00	0.22	0.23	0.21	22.00
REC	4.96	4.26	4.88	0.03	1.42	0.73	4.96	4.30	4.93	0.03	1.38	0.78	21.08	21.08	0	0.18	0	21.08
PLAY	4.95	4.26	4.87	0.03	1.40	0.72	4.95	4.30	4.92	0.03	1.34	0.76	20.87	20.88	0	0.21	0	20.89
CUE	4.49	4.25	4.87	0.04	1.42	0.74	4.95	4.93	0.04	0.04	0.04	20.58	20.60	20.60	0.02	0.18	0	20.58
REV	4.94	4.26	4.87	0.04	1.41	0.73	4.95	4.93	0.04	0.04	0.04	20.50	20.50	20.50	0.02	—	—	20.50
REW	4.96	4.95	0.03	0.03	0.03	21.20	4.96	4.94	0.03	0.03	0.03	21.20	21.20	21.23	0.01	0.13	0.01	21.20
F.F.	4.95	4.95	0.03	0.03	0.03	21.30	4.95	4.94	0.03	0.03	0.03	21.30	21.30	21.32	0	—	0	21.30

TRANSISTOR REF. NO. / MODE	Q6239			Q6240			Q6241			Q6242			Q6243			Q6244		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0.63	0.01	0.11	0.03	0.03	0.11	0.66	11.81	0.55	1.25	0.66	0.55	0.43	1.25	0.01	0.04	0
REC	0.03	0.66	0.04	0.03	0.62	0.07	0.12	0.67	11.83	0.57	1.27	0.67	0.57	0.45	1.27	0.03	0.05	0.06
PLAY	0.02	0.65	0.04	0.02	0.62	0.07	0.12	0.67	11.80	0.57	1.26	0.67	0.57	0.44	1.26	0.02	0.05	0.03
CUE	0.04	0.67	0.05	0.04	0.64	0.07	0.13	0.68	11.80	0.58	1.27	0.68	0.58	0.45	1.27	0.04	0.67	0.04
REV	0.04	0.67	0.05	0.04	0.64	0.07	0.13	0.68	11.79	0.58	1.27	0.68	0.58	0.45	1.27	0.04	0.67	0.04
REW	0.02	0.65	0.03	0.02	0.63	0.05	0.12	0.67	11.80	0.57	1.27	0.67	0.57	0.44	1.27	0.02	0.05	0.03
F.F.	0.02	0.65	0.03	0.02	0.64	0.05	0.11	0.67	11.81	0.57	1.27	0.67	0.56	0.46	1.28	0.02	0.05	0.03

TRANSISTOR REF. NO. / MODE	Q6245			Q6246			Q6247			Q6248			Q6249			Q6250		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
STOP	0.01	0.59	0.02	0.01	0.63	0.06	0.01	0.04	9.26	9.26	9.26	—	0.01	0.01	—	9.27	9.26	—
REC	0.02	0.13	2.69	0.03	0.14	0.72	0.03	0.05	2.70	—	—	—	0.03	0.03	2.60	—	—	—
PLAY	0.02	0.13	2.66	0.02	0.13	0.71	0.03	0.05	2.67	2.67	1.97	2.58	0.03	0.03	2.57	2.67	2.67	0.13
CUE	0.03	0.14	2.98	0.04	0.15	0.73	0.77	1.45	0.85	2.95	2.95	0.29	0.04	0.77	0.29	2.95	2.22	2.81
REV	0.03	0.14	2.98	0.04	0.15	0.73	0.04	0.06	2.94	2.94	2.21	2.78	0.04	0.04	2.78	2.94	2.94	0.23
REW	0.02	0.13	9.50	0.02	0.14	0.75	0.03	0.05	9.76	9.76	9.03	9.72	0.03	0.03	9.73	9.76	9.76	0.05
F.F.	0.02	0.13	10.12	0.02	0.13	0.75	0.77	1.48	2.50	10.28	10.27	0.05	0.03	0.77	0.05	10.27	9.53	10.24

TRANSISTOR REF. NO. / MODE	Q6251			Q6252			Q2653		
	E	B	C	E	B	C	E	B	C
STOP	0.01	0.01	—	0.01	0.03	9.26	0.01	0.01	0
REC	0.03	0.74	0.13	0.74	1.42	0.81	0.03	0.63	0.03
PLAY	0.03	0.74	0.13	0.74	1.40	0.80	0.02	0.83	0.03
CUE	0.04	0.04	2.81	0.04	0.06	2.95	0.04	0.04	0
REV	0.04	0.77	0.23	0.77	1.44	0.85	0.04	0.04	−0.01
REW	0.03	0.76	0.05	0.76	1.47	2.04	0.02	0.02	0.03
F.F.	0.03	0.03	10.24	0.03	0.05	10.27	0.02	0.02	0.02

SYSTEM CONTROL II IC DC VOLTAGE CHART

IC REF NO. / MODE	IC6201							
	1	2	3	4	5	6	7	8
STOP	1.38	4.85	1.99	0.01	9.24	9.27	9.57	11.84
REC	1.39	4.83	1.99	0.02	2.75	2.75	3.46	11.86
PLAY	1.38	4.80	1.99	0.02	2.74	2.75	3.44	11.83
CUE	1.40	4.80	2.00	0.03	3.06	3.07	3.87	11.82
REV	1.40	4.81	2.00	0.03	3.06	3.07	3.88	11.82
REW	1.39	4.78	1.99	0.02	9.73	9.76	10.47	11.83
F.F.	1.42	4.82	1.99	0.02	10.39	10.32	11.05	11.83

P6207 (System Control II C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	—	—	—
2	Audio Muting	P6403-2	Control & Sub System Control
3	Dew LED	P6503-2	Operation
4	EE/VV Select	P6503-1	Operation
5	Slack Sensor Sig.	P1501-3	Tape Slack Sensor
6	GND	P1501-2	Tape Slack Sensor
7	12V	P1501-1	Tape Slack Sensor
8	—	—	—

P6201 (System Control II C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Play/Dub (H)	P706-3	TV Demodulator
2	CH Lock (H)	P706-1	TV Demodulator

P6202 (System Control II C.B.A)

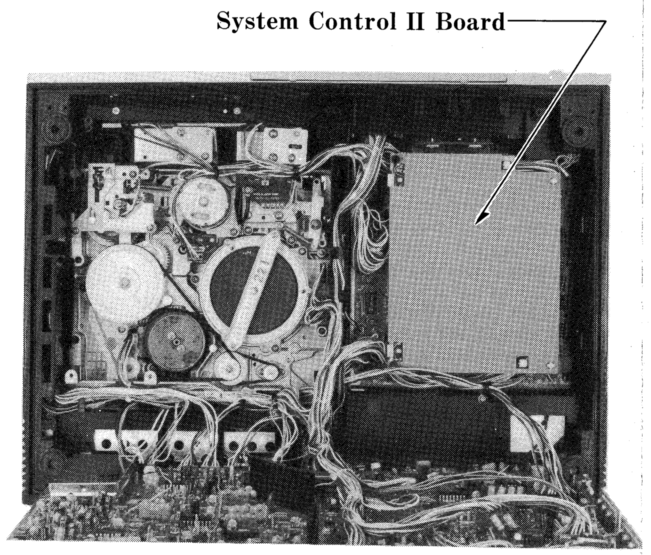
PIN NO.	SIGNAL NAME	DESTINATION	
1	Pause (L)	P2006-10	Control & Sub System Control
2	Pause Reset	P2002-8	Control & Sub System Control
3	Loading End (H)	P2006-8	Control & Sub System Control
4	EE/VV Select	P3001-6	Luminance & Chrominance
5	Except REC 12V	P3001-5	Luminance & Chrominance
6	REC Play 12V	P3001-1	Luminance & Chrominance
7	REC 12V	P3001-4	Luminance & Chrominance
8	—	—	—
9	—	—	—
10	Loading End REC A-Dub (L)	P4009-3	Audio
11	A-Dub (H)	P4009-2	Audio
12	Muting (H)	P4009-1	Audio

P6203 (System Control II C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Unreg. 20V	P1006-5	Power Supply
2	12V	P1004-3	Power Supply
3	Loading (M) Cont.	P1515-2	TR
4	GND	P1005-5	Power Supply
5	GND	P1515-3	TR

P6204 (System Control II C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Reel (M) B	P1516-2	TR
2	Reel (M) E	P1516-3	TR



P6205 (System Control II C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Pinch Sol A	P1514-2	Pinch Sol
2	Pinch Sol B	P1514-3	Pinch Sol
3	Pinch Sol C	P1514-4	Pinch Sol
4	GND	P1514-7	Pinch Sol
5	DEW Sensor	P1514-8	Pinch Sol

P6206 (System Control II C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	F.F REW A	SL1502	F.F REW Sol
2	F.F REW B	SL1502	F.F REW Sol
3	F.F REW C	SL1502	F.F REW Sol
4	Play Sol A	SL1503	Play Sol
5	Play Sol B	SL1503	Play Sol
6	Play Sol C	SL1503	Play Sol

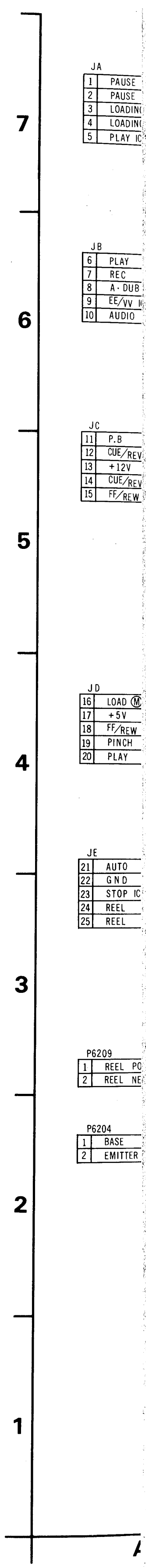
P6208 (System Control II C.B.A)

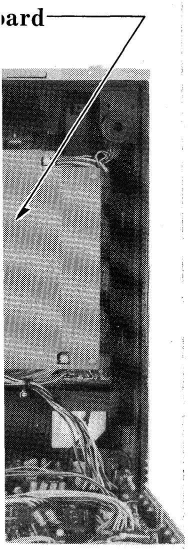
PIN NO.	SIGNAL NAME	DESTINATION	
1	12V	P1502-3	Review Sensor
2	GND	P1502-5	Review Sensor
3	Review Sensor OUT 1	P1502-2	Review Sensor
4	Review Sensor OUT 2	P1502-4	Review Sensor
5	—	—	—

P6209 (System Control II C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Reel (M) Posi.	M1502	Reel Motor
2	Reel (M) Nega.	M1502	Reel Motor

SYST





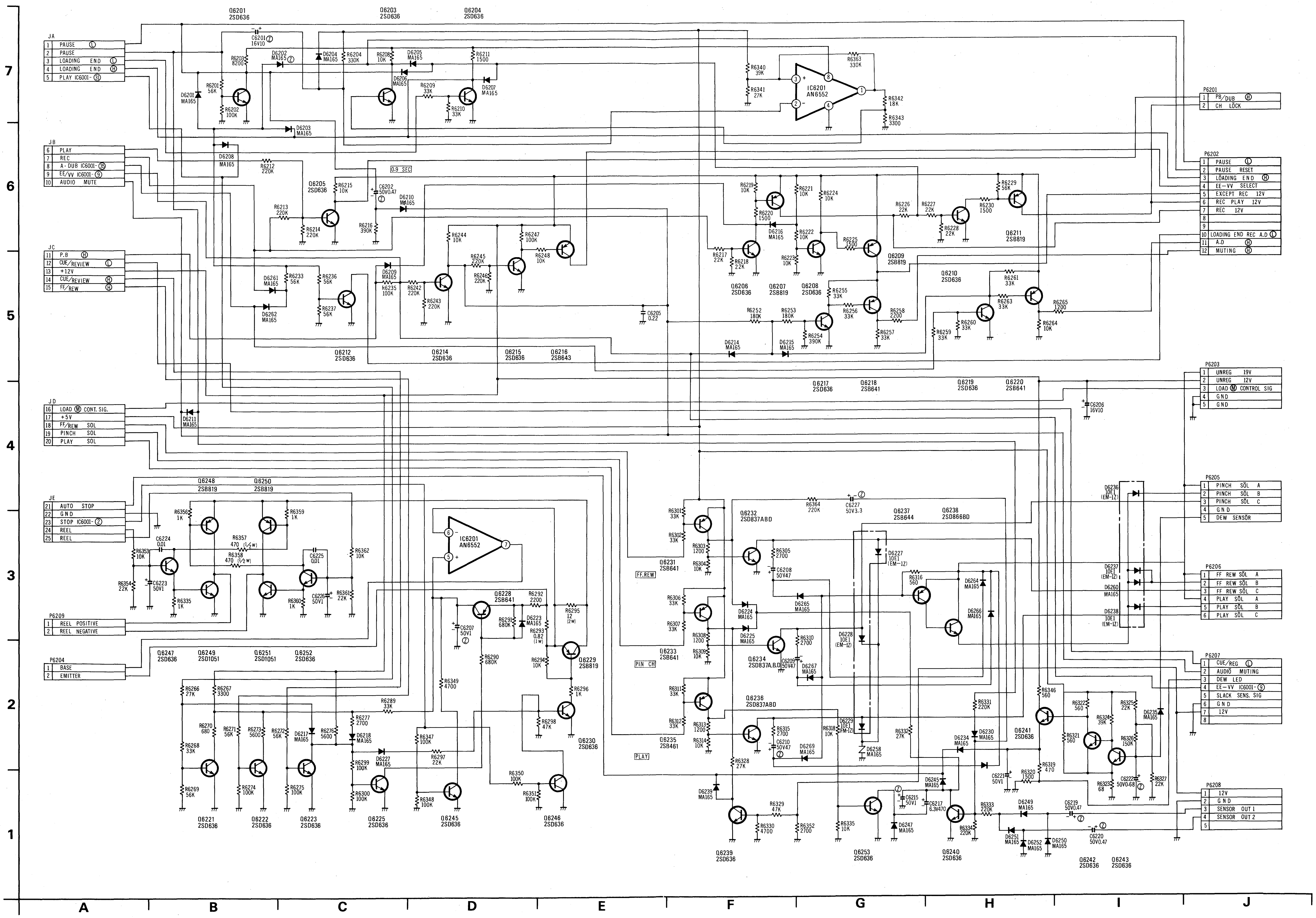
)ESTINATION
Sol
Sol
Sol
Sol
Sol

)ESTINATION
EW Sol
EW Sol
EW Sol
;ol
;ol
;ol

'ESTINATION
v Sensor
v Sensor
v Sensor
v Sensor

ESTINATION
lotor
lotor

SYSTEM CONTROL II SCHEMATIC DIAGRAM


JA
1 PAUSE Ⓛ
2 PAUSE
3 LOADING END Ⓛ
4 LOADING END Ⓗ
5 PLAY IC6001-③
JB
6 PLAY
7 REC
8 A-DUB IC6001-⑮
9 EE/VV IC6001-⑨
10 AUDIO MUTE
JC
11 P.B Ⓗ
12 CUE/REVIEW Ⓛ
13 +12V
14 CUE/REVIEW Ⓗ
15 FF/REW Ⓗ
JD
16 LOAD Ⓜ CONT. SIG.
17 +5V
18 FF/REW SOL
19 PINCH SOL
20 PLAY SOL
JE
21 AUTO STOP
22 GND
23 STOP IC6001-②
24 REEL
25 REEL
P6209
1 REEL POSITIVE
2 REEL NEGATIVE
P6204
1 BASE
2 EMITTER
P6201
1 PB/DUB Ⓗ
2 CH LOCK
P6202
1 PAUSE Ⓛ
2 PAUSE RESET
3 LOADING END Ⓗ
4 EE-VV SELECT
5 EXCEPT REC 12V
6 REC PLAY 12V
7 REC 12V
8
9
10 LOADING END REC A.D Ⓛ
11 A.D Ⓗ
12 MUTING Ⓗ
P6203
1 UNREG 19V
2 UNREG 12V
3 LOAD Ⓜ CONTROL SIG
4 GND
5 GND
P6205
1 PINCH SOL A
2 PINCH SOL B
3 PINCH SOL C
4 GND
5 DEW SENSOR
P6206
1 FF REW SOL A
2 FF REW SOL B
3 FF REW SOL C
4 PLAY SOL A
5 PLAY SOL B
6 PLAY SOL C
P6207
1 CUE/REG Ⓛ
2 AUDIO MUTING
3 DEW LED
4 EE-VV IC6001-⑨
5 SLACK SENS. SIG
6 GND
7 12V
8
P6208
1 12V
2 GND
3 SENSOR OUT 1
4 SENSOR OUT 2
IC6201 AN6552
Q6201 2SD636
Q6203 2SD636
Q6204 2SD636
Q6205 2SD636
Q6206 2SD636
Q6207 2SB819
Q6208 2SD636
Q6209 2SB819
Q6210 2SD636
Q6211 2SB819
Q6212 2SD636
Q6214 2SD636
Q6215 2SD636
Q6216 2SB643
Q6217 2SD636
Q6218 2SB641
Q6219 2SD636
Q6220 2SB641
Q6221 2SD636
Q6222 2SD636
Q6223 2SD636
Q6225 2SD636
Q6228 2SB641
Q6229 2SB819
Q6230 2SD636
Q6231 2SB641
Q6232 2SD837ABD
Q6233 2SB641
Q6234 2SD837A.B.D
Q6235 2SB461
Q6236 2SD837ABD
Q6237 2SB644
Q6238 2SD866BD
Q6239 2SD636
Q6240 2SD636
Q6241 2SD636
Q6242 2SD636
Q6243 2SD636
Q6245 2SD636
Q6246 2SD636
Q6247 2SD636
Q6248 2SB819
Q6249 2SD1051
Q6250 2SB819
Q6251 2SD1051
Q6252 2SD636
Q6253 2SD636
0.9 SEC
FF.REW
PIN CH
PLAY
A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
7

SYSTEM CONTROL II CIRCUIT BOARD (VEP06109A)

JA

1	PAUSE
2	PAUSE
3	LOADING END
4	LOADING END
5	PLAY

JB

6	PLAY
7	REC
8	A・DUB
9	EE/VV
10	AUDIO MUTE

JC

11	P.B
12	CUE/REVIEW
13	12V
14	CUE/REVIEW
15	FF/REW

JD

16	LOAD・CONT・SIG
17	5V
18	FF/REW SOL
19	PINCH SOL
20	PLAY SOL

P6203

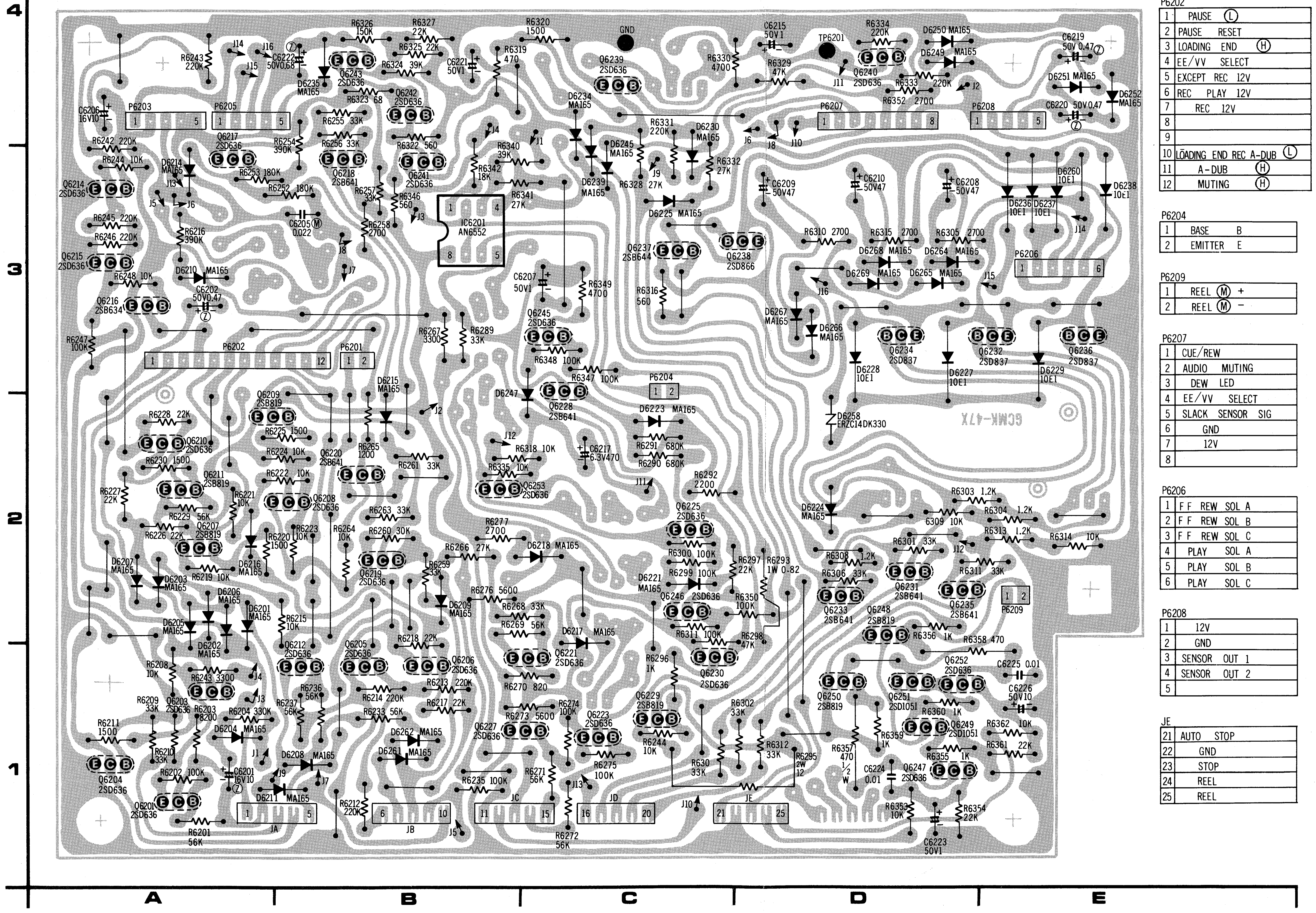
1	UNREG 19V
2	12V
3	LOAD CONTROL SIG
4	GND
5	GND

P6205

1	PINCH SOL A
2	PINCH SOL B
3	PINCH SOL C
4	GND
5	DEW SENSOR

P6201

1	PB/DUB
2	CH LOCK



P6202

1	PAUSE Ⓛ
2	PAUSE RESET
3	LOADING END Ⓗ
4	EE/VV SELECT
5	EXCEPT REC 12V
6	REC PLAY 12V
7	REC 12V
8	
9	
10	LOADING END REC A-DUB Ⓛ
11	A-DUB Ⓗ
12	MUTING Ⓗ

P6204

1	BASE B
2	EMITTER E

P6209

1	REEL Ⓜ +
2	REEL Ⓜ −

P6207

1	CUE/REW
2	AUDIO MUTING
3	DEW LED
4	EE/VV SELECT
5	SLACK SENSOR SIG
6	GND
7	12V
8	

P6206

1	FF REW SOL A
2	FF REW SOL B
3	FF REW SOL C
4	PLAY SOL A
5	PLAY SOL B
6	PLAY SOL C

P6208

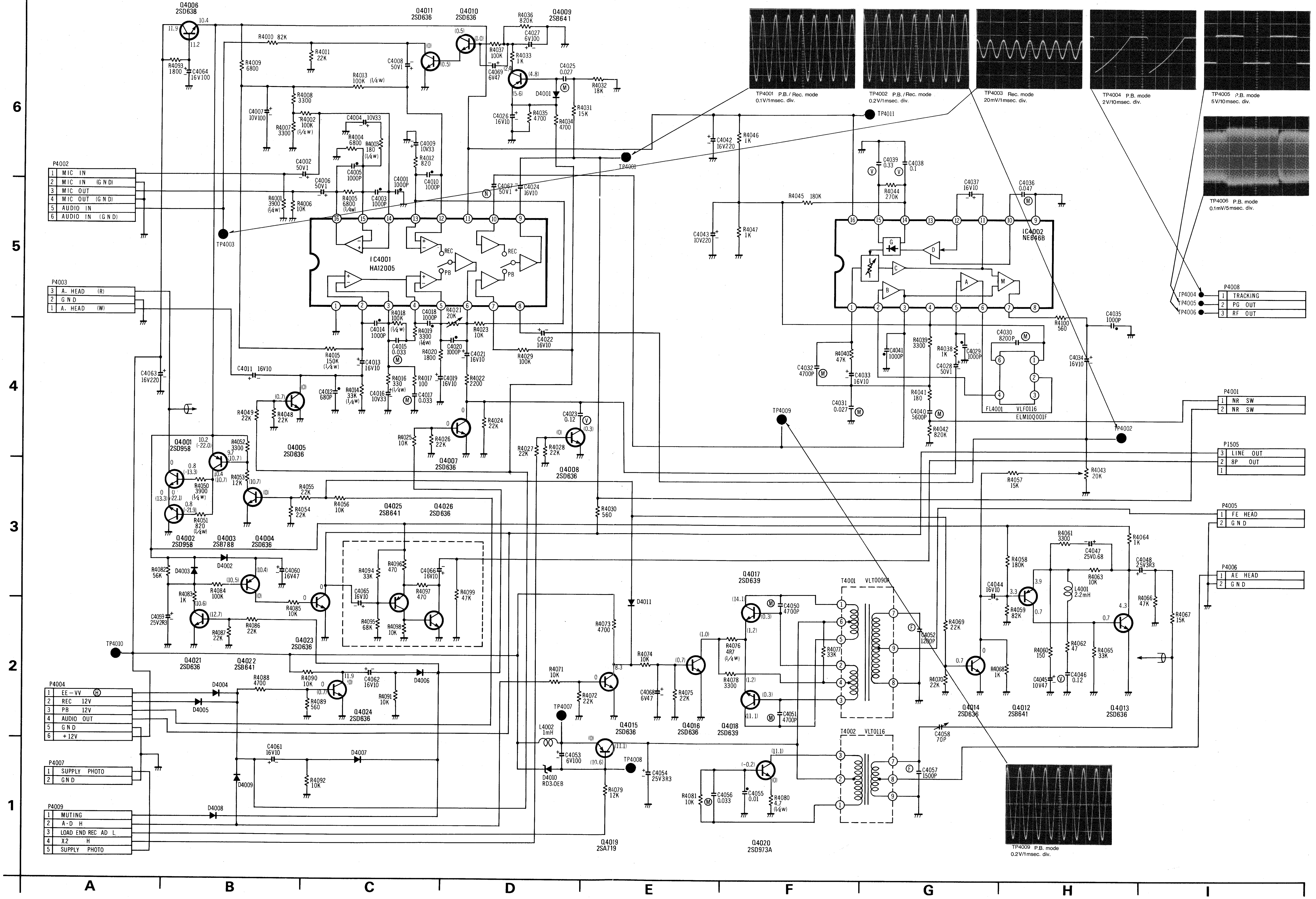
1	12V
2	GND
3	SENSOR OUT 1
4	SENSOR OUT 2
5	

JE

21	AUTO STOP
22	GND
23	STOP
24	REEL
25	REEL

System Control (II)C.B.A.	
Q6201	A-1
Q6203	A-1
Q6204	A-1
Q6205	B-1
Q6206	B-1
Q6207	A-2
Q6208	B-2
Q6209	B-2
Q6210	A-2
Q6211	A-2
Q6212	B-1
Q6214	A-3
Q6215	A-3
Q6216	A-3
Q6217	A-3
Q6218	B-3
Q6219	B-2
Q6220	B-2
Q6221	C-1
Q6223	C-1
Q6225	C-2
Q6227	C-1
Q6228	C-2
Q6229	C-1
Q6230	C-1
Q6231	D-2
Q6232	D-3
Q6233	D-2
Q6234	D-3
Q6235	D-2
Q6236	E-3
Q6237	C-3
Q6238	D-3
Q6239	C-4
Q6240	D-4
Q6241	B-3
Q6242	B-4
Q6243	B-4
Q6245	C-3
Q6246	C-2
Q6247	D-1
Q6248	D-2
Q6249	D-1
Q6250	D-1
Q6251	D-1
Q6252	D-1
Q6253	B-2

AUDIO SCHEMATIC DIAGRAM



TP4001 P.B. / Rec. mode
0.1V/1msec. div.
TP4002 P.B. / Rec. mode
0.2V/1msec. div.
TP4003 Rec. mode
20mV/1msec. div.
TP4004 P.B. mode
2V/10msec. div.
TP4005 P.B. mode
5V/10msec. div.
TP4006 P.B. mode
0.1mV/5msec. div.
TP4009 P.B. mode
0.2V/1msec. div.
P4002
1 MIC IN
2 MIC IN (GND)
3 MIC OUT
4 MIC OUT (GND)
5 AUDIO IN
6 AUDIO IN (GND)
P4003
3 A. HEAD (R)
2 GND
1 A. HEAD (W)
P4004
1 EE-VV H
2 REC 12V
3 PB 12V
4 AUDIO OUT
5 GND
6 +12V
P4007
1 SUPPLY PHOTO
2 GND
P4009
1 MUTING
2 A-D H
3 LOAD END REC AD L
4 X2 H
5 SUPPLY PHOTO
P4008
1 TRACKING
2 PG OUT
3 RF OUT
P4001
1 NR SW
2 NR SW
P1505
3 LINE OUT
2 8P OUT
1
P4005
1 FE HEAD
2 GND
P4006
1 AE HEAD
2 GND
IC4001
HA12005
IC4002
NE646B
FL4001 VLF0116
ELM10Q001F
T4001 VLT0090P
T4002 VLT0116
Q4006 2SD638
Q4011 2SD636
Q4010 2SD636
Q4009 2SB641
Q4001 2SD958
Q4002 2SD958
Q4003 2SB788
Q4004 2SD636
Q4005 2SD636
Q4007 2SD636
Q4008 2SD636
Q4025 2SB641
Q4026 2SD636
Q4021 2SD636
Q4022 2SB641
Q4023 2SD636
Q4024 2SD636
Q4015 2SD636
Q4016 2SD636
Q4017 2SD639
Q4018 2SD639
Q4019 2SA719
Q4020 2SD973A
Q4014 2SD636
Q4012 2SB641
Q4013 2SD636
D4001
D4002
D4003
D4004
D4005
D4006
D4007
D4008
D4009
D4010 RD3.0EB
D4011
L4001 2.2mH
L4002 1mH
TP4001
TP4002
TP4003
TP4007
TP4008
TP4009
TP4010
TP4011
REC
PB
A
B
C
D
E
F
G
H
I
1
2
3
4
5
6

AUDIO CIRCUIT BOARD (VEP0458A)

P4005

1	EE HEAD
2	GND

P4006

1	AE HEAD
2	GND

P4007

1	SUPPLY PHOTO
2	GND

P4008

1	TRACKING
2	PG OUT
3	RF OUT

P4009

1	MUTING
2	A·D H
3	LOAD END REC AD H
4	X2 H
5	SUPPLY PHOTO

P4004

1	EE−VV Ⓗ
2	REC 12V
3	PB 12V
4	AUDIO OUT
5	GND
6	+12V

P1505

3	LINE OUT
2	8P OUT
1	

P4001

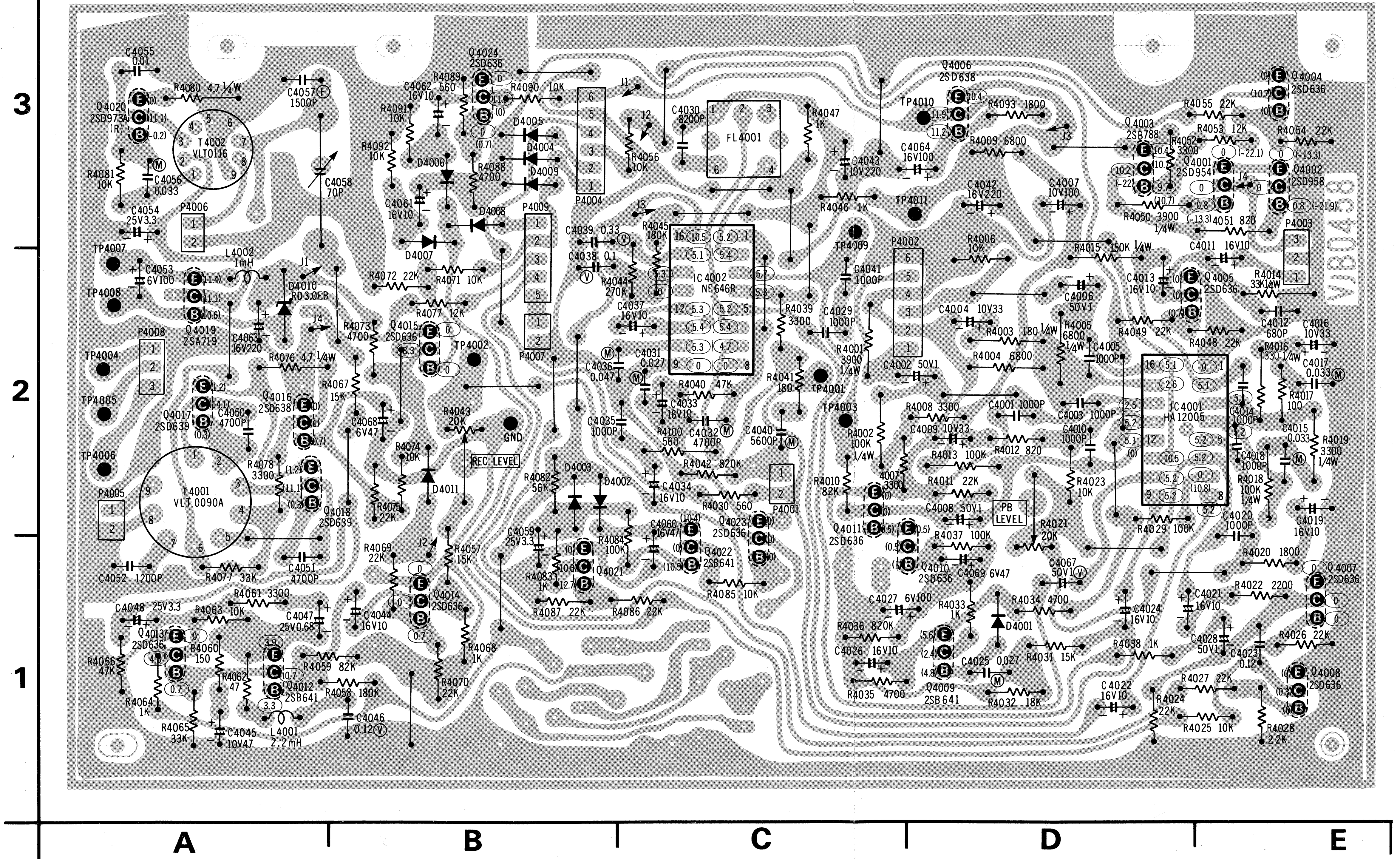
1	NR SW
2	NR SW

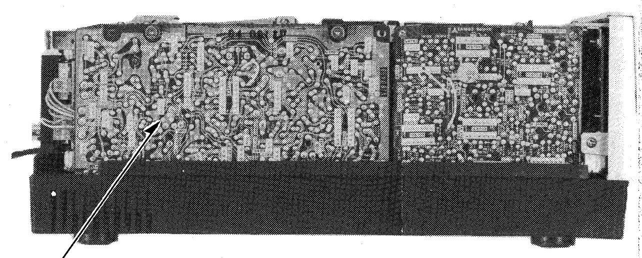
P4002

1	MIC IN
2	MIC IN (GND)
3	MIC OUT
4	MIC OUT(GND)
5	AUDIO IN
6	AUDIO IN(GND)

P4003

1	A.HEAD (R)
2	GND
3	A.HEAD (W)


3
2
1
A
B
C
D
E
VJB0458
C4055 0.01
Q4020 2SD973A (R)
R4080 4.7 1/4W
C4057 Ⓕ 1500P
T4002 VLT0116
R4081 10K
C4056 0.033
C4054 25V3.3
C4058 70P
P4006
TP4007
TP4008
TP4004
TP4005
TP4006
C4053 6V100
L4002 1mH
D4010 RD3.0EB
Q4019 2SA719
C4063 16V220
P4008
R4076 4.7 1/4W
Q4017 2SD639
C4050 4700P
Q4016 2SD638
C4068 6V47
R4067 15K
R4073 4700
T4001 VLT0090A
R4078 3300
Q4018 2SD639
P4005
C4052 1200P
R4077 33K
C4051 4700P
R4061 3300
C4048 25V3.3
R4063 10K
C4047 25V0.68
Q4013 2SD636
R4066 47K
R4060 150
R4062 47
Q4012 2SB641
R4059 82K
R4058 180K
R4064 1K
R4065 33K
C4045 10V47
L4001 2.2mH
C4046 0.12 Ⓥ
Q4024 2SD636
R4089 560
C4062 16V10
R4090 10K
R4091 10K
R4092 10K
D4005
D4004
D4006
D4009
R4088 4700
C4061 16V10
D4008
D4007
P4009
P4004
P4007
R4072 22K
R4071 10K
R4077 12K
Q4015 2SD636
TP4002
R4043 20K
GND
REC LEVEL
R4074 10K
D4011
R4075 22K
R4069 22K
C4059 25V3.3
R4057 15K
Q4014 2SD636
C4044 16V10
R4068 1K
R4070 22K
J1
J2
J3
J4
C4030 8200P
FL4001
R4056 10K
C4039 0.33
C4038 0.1
R4045 180K
R4044 270K
IC4002 NE646B
C4037 16V10
C4036 0.047
C4031 0.027
C4033 16V10
R4040 47K
C4035 1000P
R4100 560
C4032 4700P
R4082 56K
D4003
D4002
C4034 16V10
R4042 820K
R4030 560
R4084 100K
C4060 16V47
Q4023 2SD636
Q4022 2SB641
R4083 1K
Q4021
R4087 22K
R4086 22K
R4085 10K
R4047 1K
R4046 1K
TP4011
TP4009
C4041 1000P
R4039 3300
C4029 1000P
R4001 3900 1/4W
R4041 180
TP4001
TP4003
C4040 5600P
P4001
R4002 100K 1/4W
R4010 82K
Q4011 2SD636
Q4007 3300
Q4006 2SD638
TP4010
C4043 10V220
C4064 16V100
R4093 1800
R4009 6800
C4042 16V220
C4007 10V100
P4002
R4006 10K
C4002 50V1
C4004 10V33
R4003 180 1/4W
R4004 6800
C4006 50V1
R4005 6800 1/4W
C4005 1000P
R4008 3300
C4009 10V33
C4001 1000P
C4003 1000P
C4010 1000P
R4013 100K
R4012 820
R4011 22K
R4023 10K
C4008 50V1
PB LEVEL
R4037 100K
R4021 20K
Q4010 2SD636
C4069 6V47
C4067 50V1 Ⓥ
C4027 6V100
R4033 1K
R4034 4700
R4036 820K
D4001
C4026 16V10
C4025 0.027
R4031 15K
R4035 4700
Q4009 2SB641
R4032 18K
Q4003 2SB788
R4055 22K
R4053 12K
R4052 3300
Q4001 2SD954
Q4004 2SD636
R4054 22K
Q4002 2SD958
R4050 3900 1/4W
R4051 820
P4003
R4015 150K 1/4W
C4011 16V10
C4013 16V10
Q4005 2SD636
R4014 33K 1/4W
R4049 22K
R4048 22K
C4012 680P
C4016 10V33
R4016 330 1/4W
C4017 0.033
IC4001 HA12005
C4014 1000P
R4017 100
C4015 0.033
R4019 3300 1/4W
C4018 1000P
R4018 100K 1/4W
C4019 16V10
C4020 1000P
R4029 100K
R4020 1800
Q4007 2SD636
R4022 2200
C4024 16V10
C4021 16V10
R4038 1K
C4028 50V1
C4023 0.12
R4026 22K
C4022 16V10
R4027 22K
R4024 22K
R4025 10K
Q4008 2SD636
R4028 2.2K


Audio Board

Audio C.B.A.	
Q4001	E-3
Q4002	E-3
Q4003	D-3
Q4004	E-3
Q4005	D-2
Q4006	D-3
Q4007	E-1
Q4008	E-1
Q4009	D-1
Q4010	D-1
Q4011	C-2
Q4012	A-1
Q4013	A-1
Q4014	B-1
Q4015	B-2
Q4016	A-2
Q4017	A-2
Q4018	A-2
Q4019	A-2
Q4020	A-3
Q4021	B-1
Q4022	C-1
Q4023	C-1
Q4024	B-3

P4001 (

PIN NO.	SIGNAL NAME
1	NR SW
2	NR SW

P4002 (

PIN NO.	SIGNAL NAME
1	Mic IN
2	GND
3	Mic Amp OUT
4	GND
5	Audio IN
6	GND

P4003 (

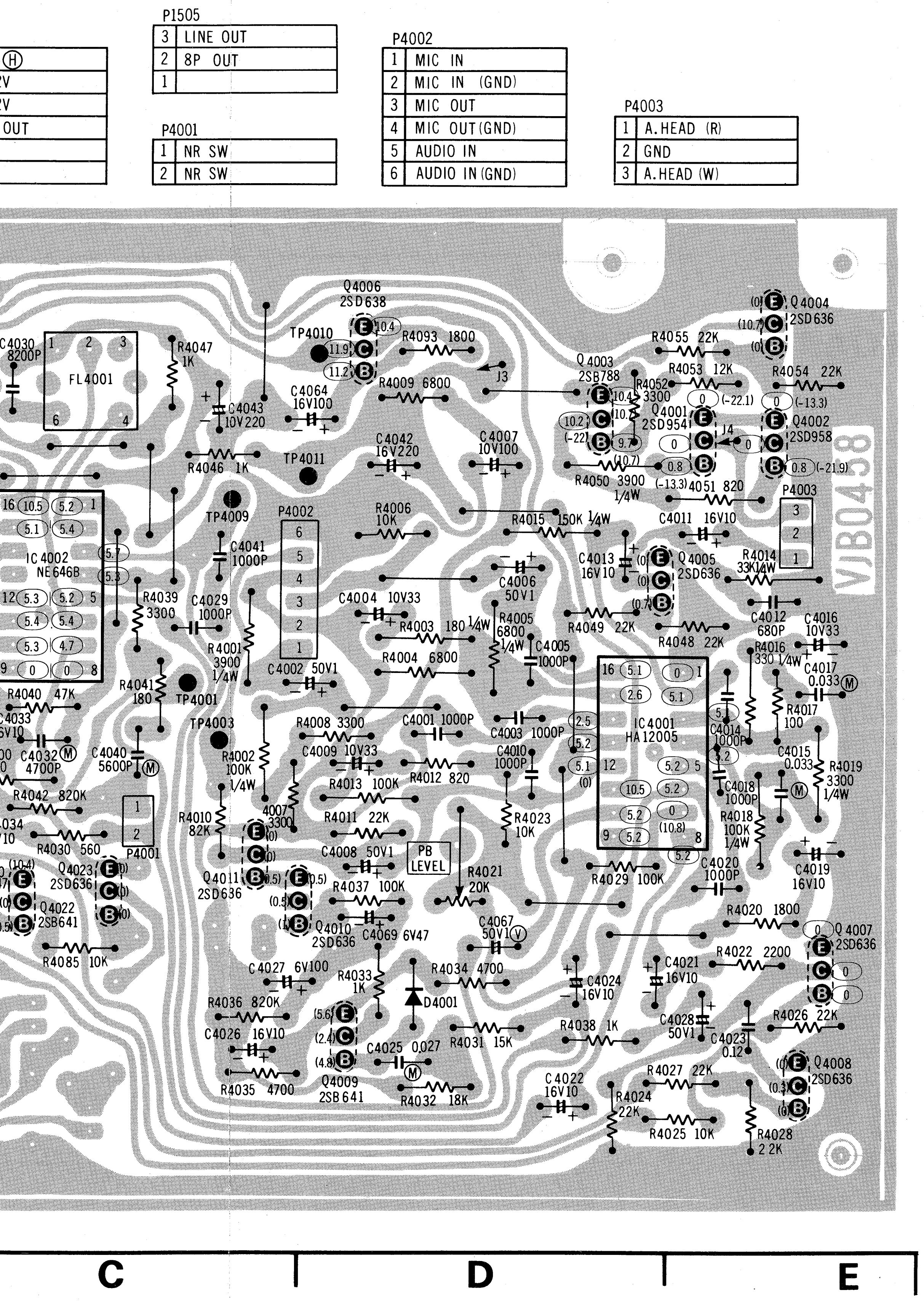
PIN NO.	SIGNAL NAME
1	Audio Head
2	GND
3	Audio Head (R)

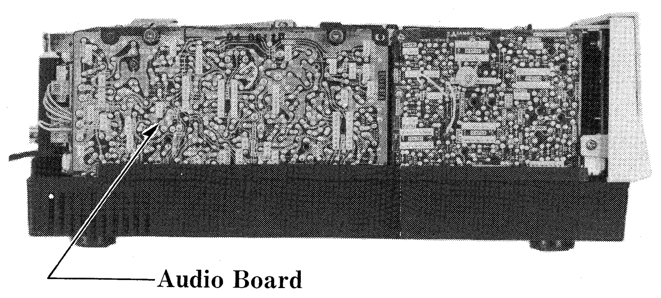
P4004 (

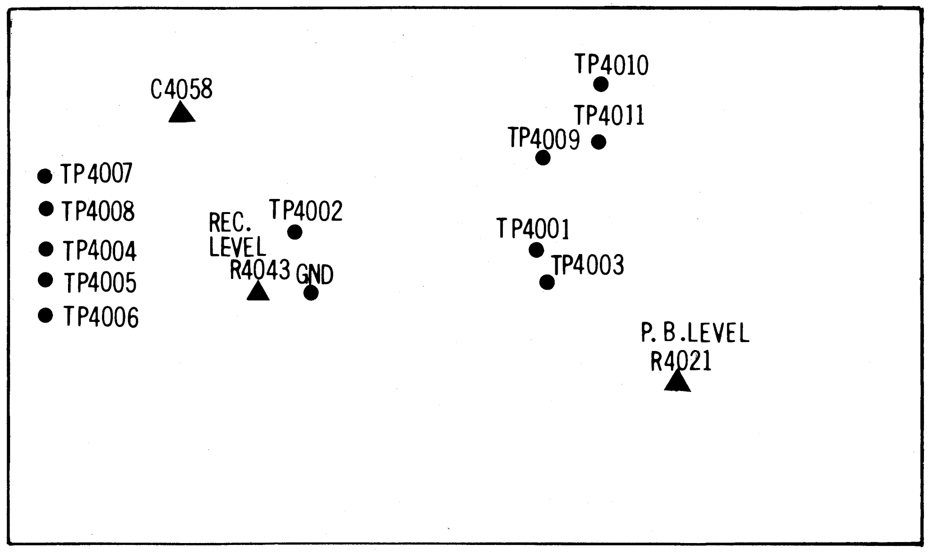
PIN NO.	SIGNAL NAME
1	EE/V.V Select
2	REC 12V
3	Except REC 12V
4	Audio OUT
5	GND
6	12V

P4005 (

PIN NO.	SIGNAL NAME
1	F.E Head
2	GND


P1505
3 LINE OUT
2 8P OUT
1
P4001
1 NR SW
2 NR SW
P4002
1 MIC IN
2 MIC IN (GND)
3 MIC OUT
4 MIC OUT (GND)
5 AUDIO IN
6 AUDIO IN (GND)
P4003
1 A.HEAD (R)
2 GND
3 A.HEAD (W)
FL4001
IC4002 NE646B
IC4001 HA12005
Q4001 2SD954
Q4002 2SD958
Q4003 2SB788
Q4004 2SD636
Q4005 2SD636
Q4006 2SD638
Q4007 2SD636
Q4008 2SD636
Q4009 2SB641
Q4010 2SD636
Q4011 2SD636
Q4022 2SB641
Q4023 2SD636
D4001
TP4001
TP4003
TP4009
TP4010
TP4011
J3
J4
PB LEVEL
R4021 20K
VJB0438
C
D
E


Audio Board


C4058
TP4010
TP4011
TP4009
TP4007
TP4008
TP4004
TP4005
TP4006
REC. LEVEL R4043
TP4002
GND
TP4001
TP4003
P.B.LEVEL R4021

Audio C.B.A.	
Q4001	E-3
Q4002	E-3
Q4003	D-3
Q4004	E-3
Q4005	D-2
Q4006	D-3
Q4007	E-1
Q4008	E-1
Q4009	D-1
Q4010	D-1
Q4011	C-2
Q4012	A-1
Q4013	A-1
Q4014	B-1
Q4015	B-2
Q4016	A-2
Q4017	A-2
Q4018	A-2
Q4019	A-2
Q4020	A-3
Q4021	B-1
Q4022	C-1
Q4023	C-1
Q4024	B-3

P4001 (Audio C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	NR SW	P1509-1	Power, Timer, NR, Select SW
2	NR SW	P1509-2	Power, Timer, NR, Select SW

P4002 (Audio C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Mic IN	P3006-1	Luminance & Chrominance
2	GND	P3006-2	Luminance & Chrominance
3	Mic Amp OUT	P3006-5	Luminance & Chrominance
4	GND	P3006-6	Luminance & Chrominance
5	Audio IN	P3006-3	Luminance & Chrominance
6	GND	P3006-4	Luminance & Chrominance

P4003 (Audio C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Audio Head	—	A/C Head
2	GND	—	—
3	Audio Head (R)	—	A/C Head

P4004 (Audio C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	EE/V.V Select	P3005-1	Luminance & Chrominance
2	REC 12V	P3005-4	Luminance & Chrominance
3	Except REC 12V	P3005-2	Luminance & Chrominance
4	Audio OUT	P3005-5	Luminance & Chrominance
5	GND	P3005-3	Luminance & Chrominance
6	12V	P3005-6	Luminance & Chrominance

P4005 (Audio C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	F.E Head	—	Full Erase Head
2	GND	—	—

P4006 (Audio C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	A.E Head	—	A/C HEAD
2	GND	—	—

P4007 (Audio C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Supply Photo TR	Q6551-(C)	Supply Photo TR
2	—	—	—

P4008 (Audio C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Tracking	P3011-2	Luminance & Chrominance
2	PG SW Pulse	P3011-3	Luminance & Chrominance
3	FM IN	P3011-1	Luminance & Chrominance

P4009 (Audio C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
1	Muting (H)	P6202-12	System Control II
2	A.D (H)	P6202-11	System Control II
3	Loading End REC A.D (H)	P6202-10	System Control II
4	×2 (H)	P2002-7	Control & Sub System Control
5	Supply Photo TR	P6011-1	System Control I

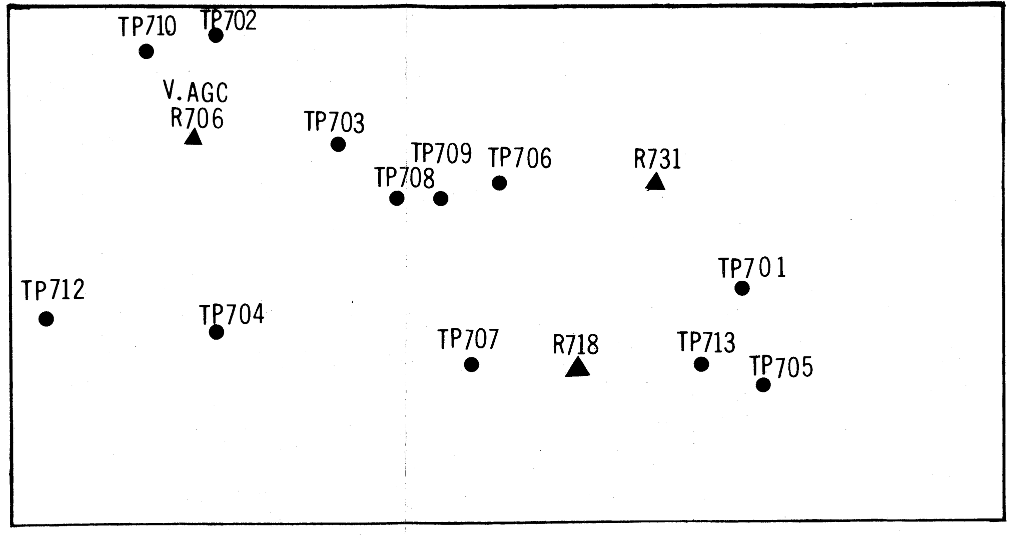
(Audio C.B.A)

PIN NO.	SIGNAL NAME	DESTINATION	
—	Line OUT	P1505-3	Rear Jack

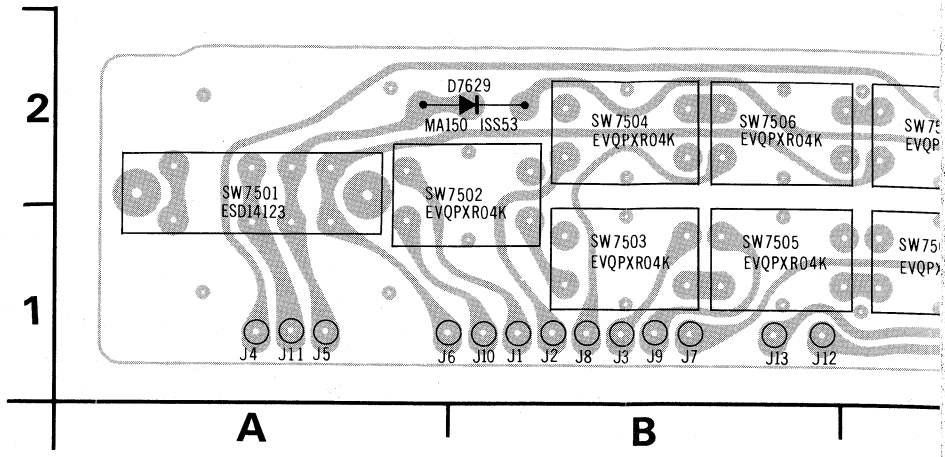
P7501 (Timer C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	GND	P1005-7 Power Supply
2	—	— —
3	Unreg. −45V	P1002-5 Power Supply
4	Unreg. −12V	P1003-6 Power Supply
5	6V	P1003-2 Power Supply

P7502 (Timer C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	Timer Set	P6001-6 System Control I
2	Timer ON	P6001-7 System Control I
3	REC Request	P6001-8 System Control I

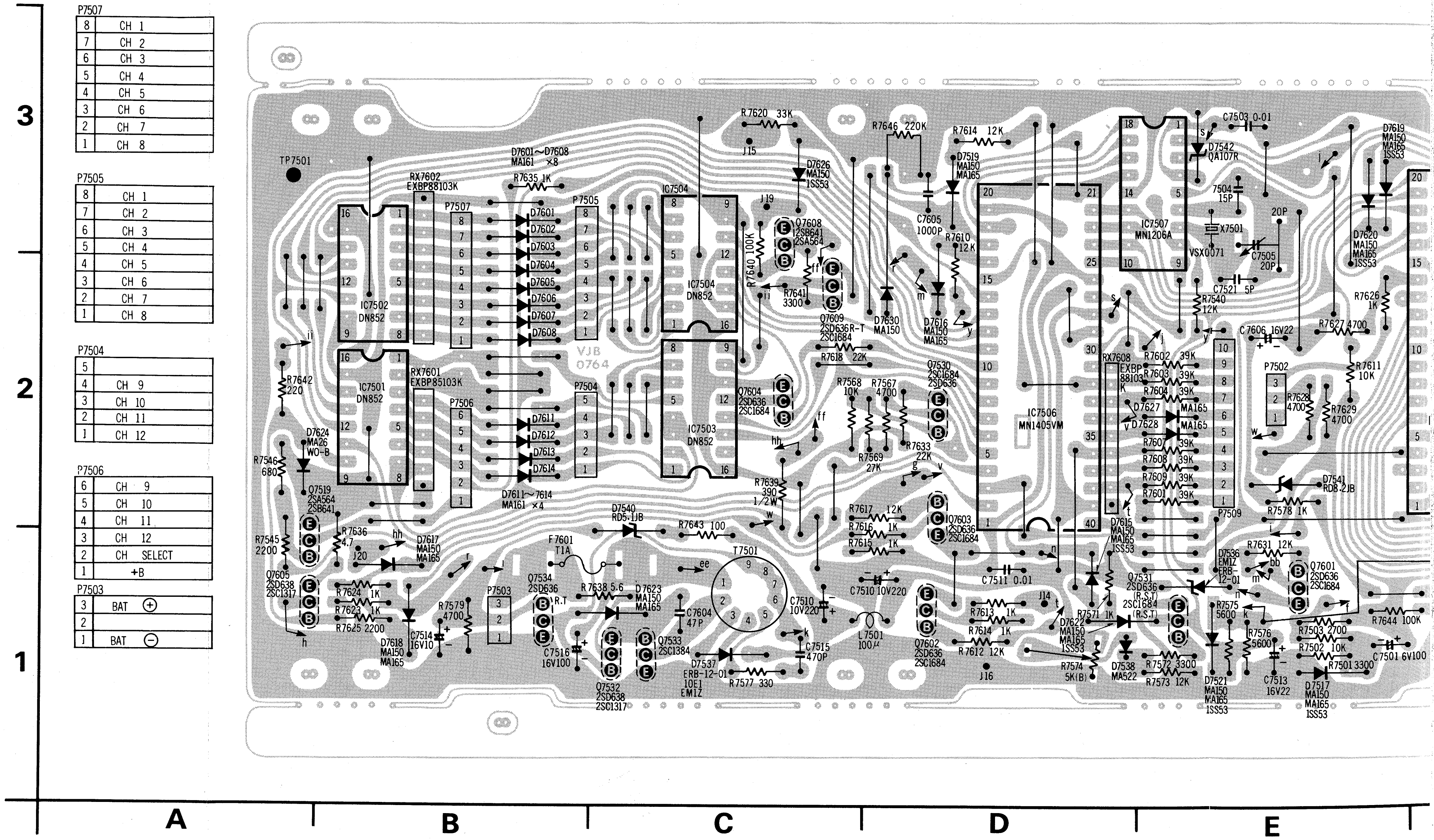
P7503 (Timer C.B.A)		
PIN NO.	SIGNAL NAME	DESTINATION
1	AC 3V	T1501-3V Power Transformer
2	AC 3V	T1501-3V Power Transformer

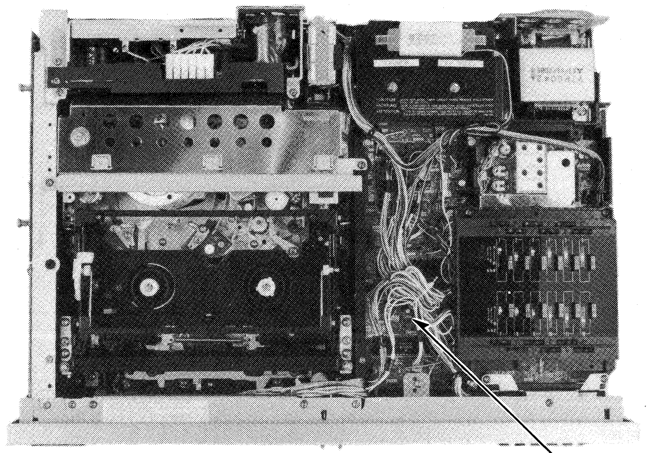

TP710
TP702
V.AGC
R706
TP703
TP709
TP706
TP708
R731
TP712
TP704
TP701
TP707
R718
TP713
TP705

TIMER OPERATION CIRCUIT BOARD (V


2
1
D7629
MA150 ISS53
SW7504
EVQPXR04K
SW7506
EVQPXR04K
SW7501
ESD14123
SW7502
EVQPXR04K
SW7503
EVQPXR04K
SW7505
EVQPXR04K
J4
J11
J5
J6
J10
J1
J2
J8
J3
J9
J7
J13
J12
A
B

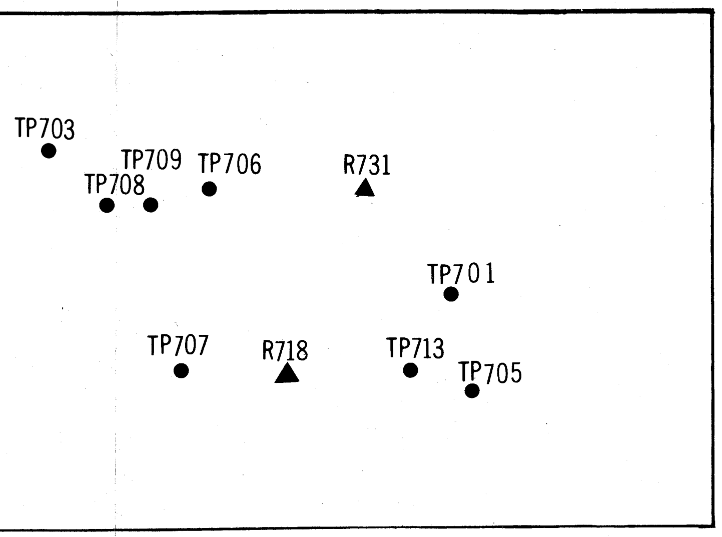
PROGRAMMABLE TIMER CIRCUIT BOARD (VEP0764A)


3
2
1
P7507
8 CH 1
7 CH 2
6 CH 3
5 CH 4
4 CH 5
3 CH 6
2 CH 7
1 CH 8
P7505
8 CH 1
7 CH 2
6 CH 3
5 CH 4
4 CH 5
3 CH 6
2 CH 7
1 CH 8
P7504
5
4 CH 9
3 CH 10
2 CH 11
1 CH 12
P7506
6 CH 9
5 CH 10
4 CH 11
3 CH 12
2 CH SELECT
1 +B
P7503
3 BAT ⊕
2
1 BAT ⊖
TP7501
IC7502
DN852
IC7501
DN852
RX7602
EXBP88103K
RX7601
EXBP85103K
D7601~D7608
MA161 ×8
D7611~7614
MA161 ×4
IC7504
DN852
IC7503
DN852
VJB
0764
IC7506
MN1405VM
IC7507
MN1206A
X7501
VSX0071
T7501
F7601
T1A
L7501
100μ
P7502
P7509
Q7519
2SA564
2SB641
Q7605
2SD638
2SC1317
Q7534
2SD636
Q7532
2SD638
2SC1317
Q7533
2SC1384
Q7608
2SB641
2SA564
Q7609
2SD636R-T
2SC1684
Q7604
2SD636
2SC1684
Q7530
2SC1684
2SD636
Q7603
2SD636
2SC1684
Q7602
2SD636
2SC1684
Q7531
2SD636
2SC1684
Q7601
2SD636
2SC1684
D7542
QA107R
D7541
RD8.2JB
D7540
RD5.1JB
D7537
ERB-12-01
10E1
EM1Z
D7536
EM1Z
ERB-12-01
D7624
MA26
WO-B
C7503 0.01
C7505 20P
C7521 5P
C7606 16V22
C7605 1000P
C7511 0.01
C7510 10V220
C7515 470P
C7604 47P
C7514 16V10
C7516 16V100
C7513 16V22
C7501 6V100
R7620 33K
R7646 220K
R7614 12K
R7635 1K
R7640 100K
R7641 3300
R7610 12K
R7618 22K
R7568 10K
R7567 4700
R7569 27K
R7633 22K
R7639 390 1/2W
R7643 100
R7642 220
R7546 680
R7545 2200
R7636 4.7
R7624 1K
R7623 1K
R7625 2200
R7579 4700
R7638 5.6
R7577 330
R7617 12K
R7616 1K
R7615 1K
R7613 1K
R7614 1K
R7612 12K
R7574 5K(B)
R7571 1K
R7572 3300
R7573 12K
R7575 5600
R7576 5600
R7503 2700
R7502 10K
R7501 3300
R7644 100K
R7631 12K
R7578 1K
R7540 12K
R7626 1K
R7627 4700
R7611 10K
R7628 4700
R7629 4700
RX7608
EXBP88103K
R7602 39K
R7603 39K
R7604 39K
R7605 39K
R7608 39K
R7609 39K
R7601 39K
J15
J19
J20
J14
J16
A
B
C
D
E

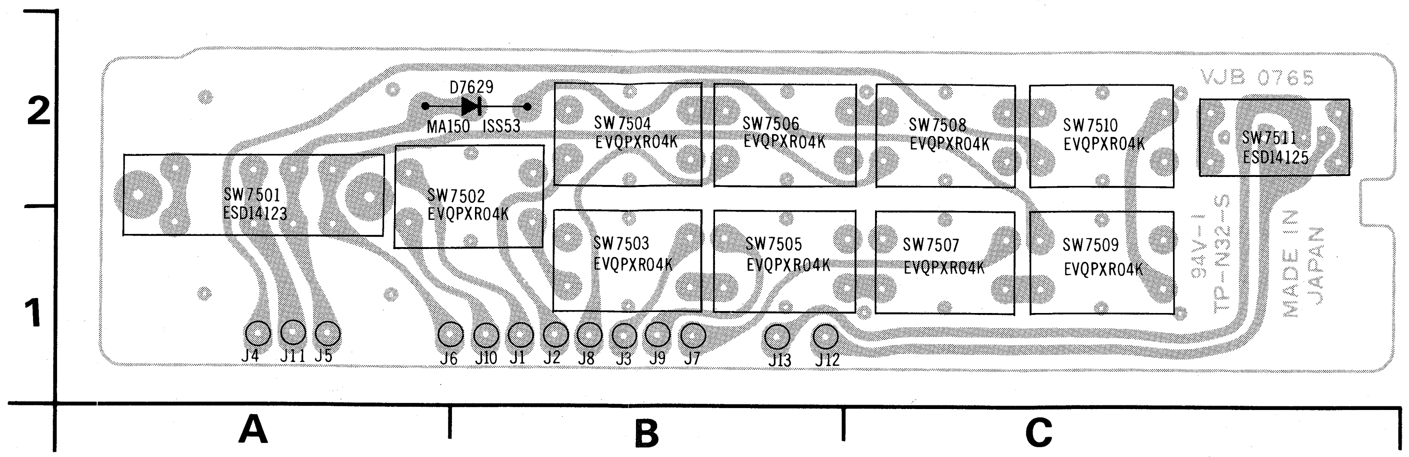


Programmable Timer Board

P. Timer C.B.A.	
Q7501	G-1
Q7502	G-1
Q7503	G-1
Q7519	A-1
Q7530	D-2
Q7531	E-1
Q7532	C-1
Q7533	C-1
Q7534	B-1
Q7601	E-1
Q7602	D-1
Q7603	D-2
Q7604	C-2
Q7605	A-1
Q7606	F-3
Q7608	C-3
Q7609	C-2
Q7610	F-2


TP703
TP709
TP706
TP708
R731
TP701
TP707
R718
TP713
TP705

TIMER OPERATION CIRCUIT BOARD (VEP0765A)


2
1
VJB 0765
D7629
MA150 1SS53
SW7501
ESD14123
SW7502
EVQPXR04K
SW7504
EVQPXR04K
SW7506
EVQPXR04K
SW7508
EVQPXR04K
SW7510
EVQPXR04K
SW7511
ESD14125
SW7503
EVQPXR04K
SW7505
EVQPXR04K
SW7507
EVQPXR04K
SW7509
EVQPXR04K
94V-1
TP-N32-S
MADE IN JAPAN
J4
J11
J5
J6
J10
J1
J2
J8
J3
J9
J7
J13
J12
A
B
C

OPERATION BOARD ↔ P7509

J1	PRO UP	1
J2	OFF	2
J3	ON	3
J4	MIN DOWN	4
J5	MIN UP	5
J6	HOUR DOWN	6
J7	HOUR UP	7
J8	DAY DOWN	8
J9	DAY UP	9
J10	KEY SELECT	10

OPERATION BOARD ↔ P7510

J11	MODE SELECT	1
J12	BRI / DIM	2
J13	⊖ 45V	3

RAMMABLE TIMER CIRCUIT BOARD (VEP0764A)

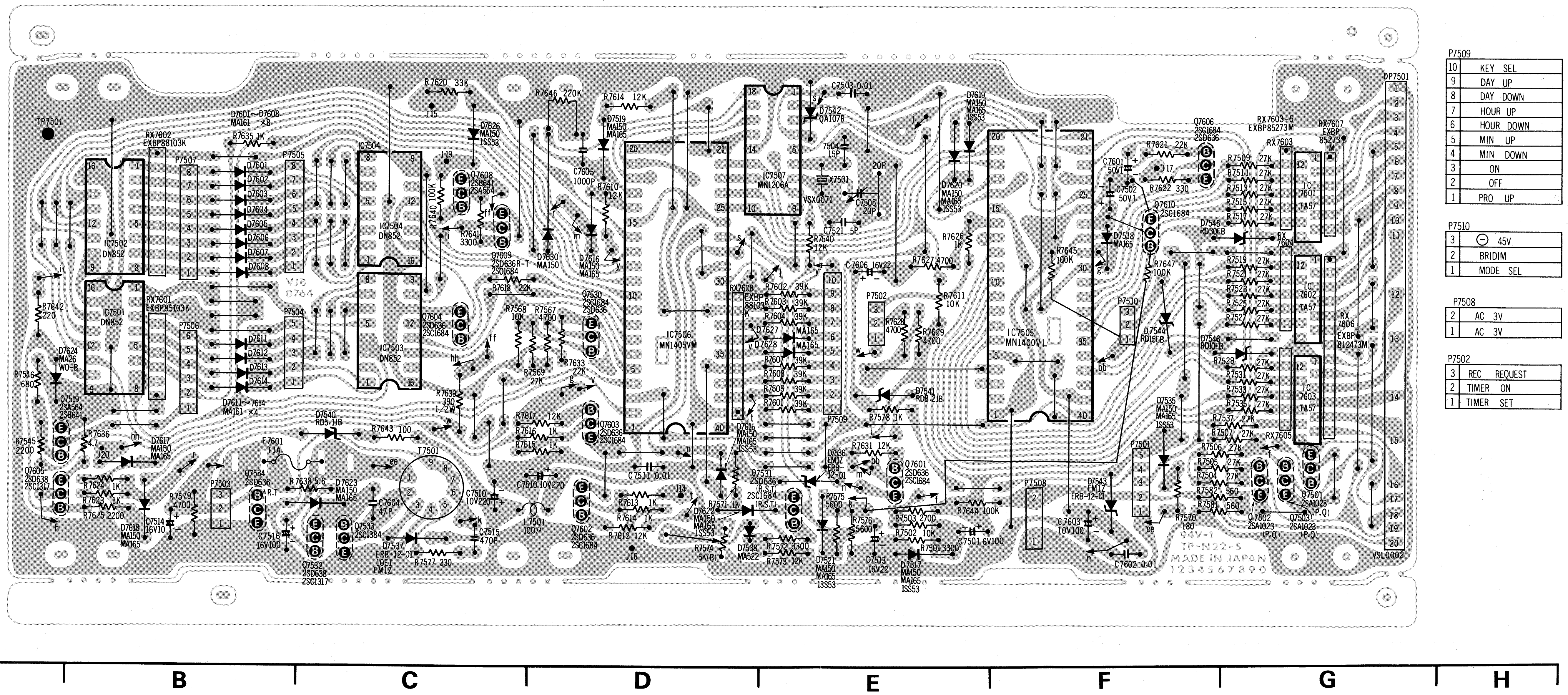
H 1
H 2
H 3
H 4
5
6
7
8

H 1
H 2
H 3
H 4
H 5
H 6
H 7
H 8

9
10
11
12

9
10
11
12
SELECT
+B

⊕
⊖


TP7501
RX7602
EXBP88103K
P7507
D7601~D7608
MA161 ×8
R7635 1K
D7601
D7602
D7603
D7604
D7605
D7606
D7607
D7608
P7505
IC7502
DN852
IC7501
DN852
RX7601
EXBP85103K
P7506
P7504
D7611
D7612
D7613
D7614
D7611~7614
MA161 ×4
VJB 0764
R7642 220
D7624 MA26 WO-B
R7546 680
Q7519 2SA564 2SB641
R7545 2200
Q7605 2SD638 2SC1317
R7636 4.7
J20
D7617 MA150 MA165
R7624 1K
R7623 1K
R7625 2200
D7618 MA150 MA165
C7514 16V10
R7579 4700
P7503
Q7534 2SD636 2SC1684
C7516 16V100
Q7532 2SD638 2SC1317
F7601 T1A
D7540 RD5.1JB
R7638 5.6
D7623 MA150 MA165
Q7533 2SC1384
C7604 47P
D7537 ERB-12-01 10E1 EM1Z
R7577 330
R7620 33K
J15
IC7504
DN852
IC7503
DN852
R7640 100K
J19
Q7608 2SB641 2SA564
R7641 3300
Q7609 2SD636R-T 2SC1684
R7618 22K
Q7604 2SD636 2SC1684
R7568 10K
R7567 4700
R7569 27K
R7633 22K
R7639 390 1/2W
R7643 100
T7501
C7510 10V220
C7515 470P
L7501 100μ
Q7602 2SD636 2SC1684
R7617 12K
R7616 1K
R7615 1K
Q7603 2SD636 2SC1684
R7646 220K
D7626 MA150 1SS53
C7605 1000P
R7614 12K
D7519 MA150 MA165
R7610 12K
D7630 MA150
D7616 MA150 MA165
Q7530 2SC1684 2SD636
IC7506
MN1405VM
C7511 0.01
J14
R7613 1K
R7614 1K
R7612 12K
J16
D7622 MA150 MA165 1SS53
R7574 5K(B)
IC7507
MN1206A
C7503 0.01
D7542 QA107R
7504 15P
X7501 VSX0071
C7505 20P
C7521 5P
R7540 12K
RX7608 EXBP 88103K
R7602 39K
R7603 39K
R7604 39K
D7627
D7628
R7605 39K
R7608 39K
R7609 39K
R7601 39K
MA165
D7615 MA150 MA165 1SS53
P7509
R7571 1K
D7538 MA522
R7572 3300
R7573 12K
Q7531 2SD636 2SC1684 (R.S.T)
D7536 EM1Z ERB-12-01
R7575 5600
D7521 MA150 MA165 1SS53
R7631 12K
R7576 5600
C7513 16V22
Q7601 2SD636 2SC1684
R7503 2700
R7502 10K
R7501 3300
D7517 MA150 MA165 1SS53
C7606 16V22
P7502
R7628 4700
R7629 4700
D7619 MA150 MA165 1SS53
D7620 MA150 MA165 1SS53
R7627 4700
R7626 1K
R7611 10K
D7541 RD8.2JB
R7578 1K
IC7505
MN1400VL
R7645 100K
P7508
R7644 100K
C7501 6V100
C7603 10V100
D7543 EM1Z ERB-12-01
C7602 0.01
P7501
P7510
C7601 50V1
C7502 50V1
R7621 22K
J17
R7622 330
Q7606 2SC1684 2SD636
Q7610 2SC1684
D7518 MA165
R7647 100K
D7544 RD15EB
D7535 MA150 MA165 1SS53
R7570 180
RX7603-5 EXBP85273M
RX7603
R7509 27K
R7511 27K
R7513 27K
R7515 27K
R7517 27K
D7545 RD30EB
RX7604
IC7601 TA57
R7519 27K
R7521 27K
R7523 27K
R7525 27K
R7527 27K
IC7602 TA57
D7546 RD10EB
R7529 27K
R7531 27K
R7533 27K
R7535 27K
R7537 27K
IC7603 TA57
RX7605
R7506 27K
R7507 27K
R7505 27K
R7504 27K
R7582 560
R7581 560
Q7502 2SA1023 (P.Q)
Q7503 2SA1023 (P.Q)
Q7501 2SA1023 (P.Q)
RX7607 EXBP 85273M
RX7606 EXBP 812473M
DP7501
VSL0002
94V-1
TP-N22-S
MADE IN JAPAN
1234567890
A
B
C
D
E
F
G
H

P7509

10	KEY SEL
9	DAY UP
8	DAY DOWN
7	HOUR UP
6	HOUR DOWN
5	MIN UP
4	MIN DOWN
3	ON
2	OFF
1	PRO UP

P7510

3	⊖ 45V
2	BRIDIM
1	MODE SEL

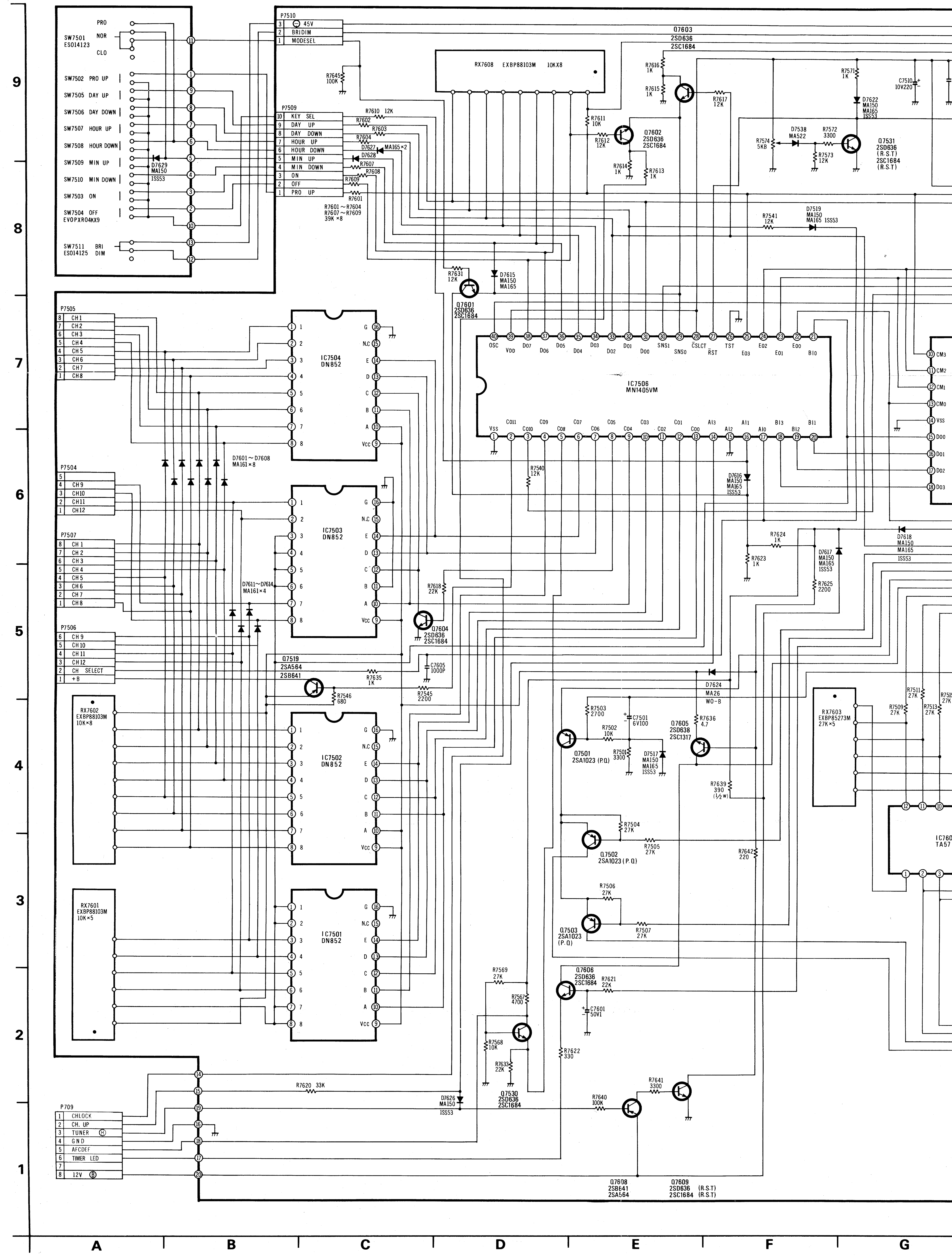
P7508

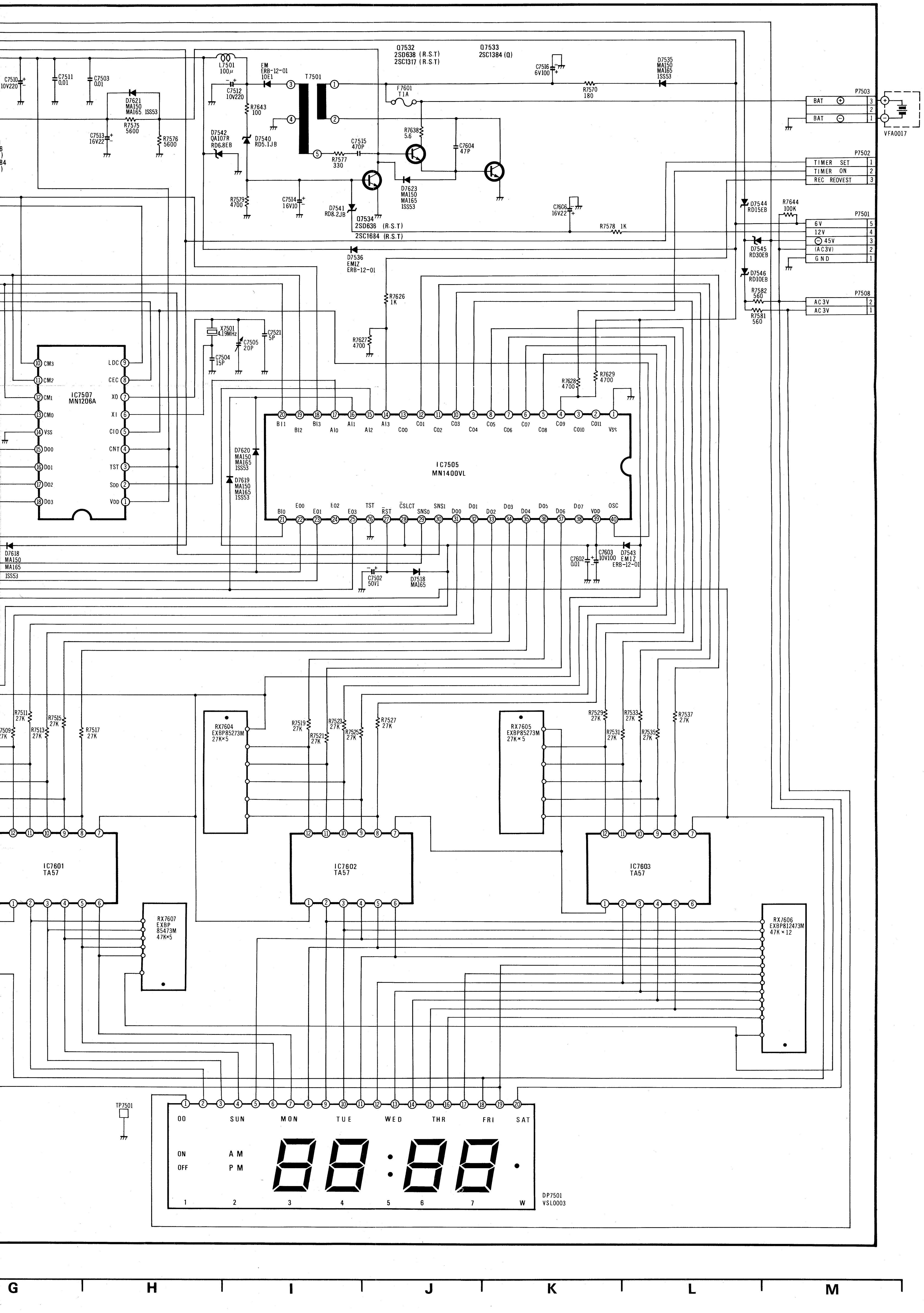
2	AC 3V
1	AC 3V

P7502

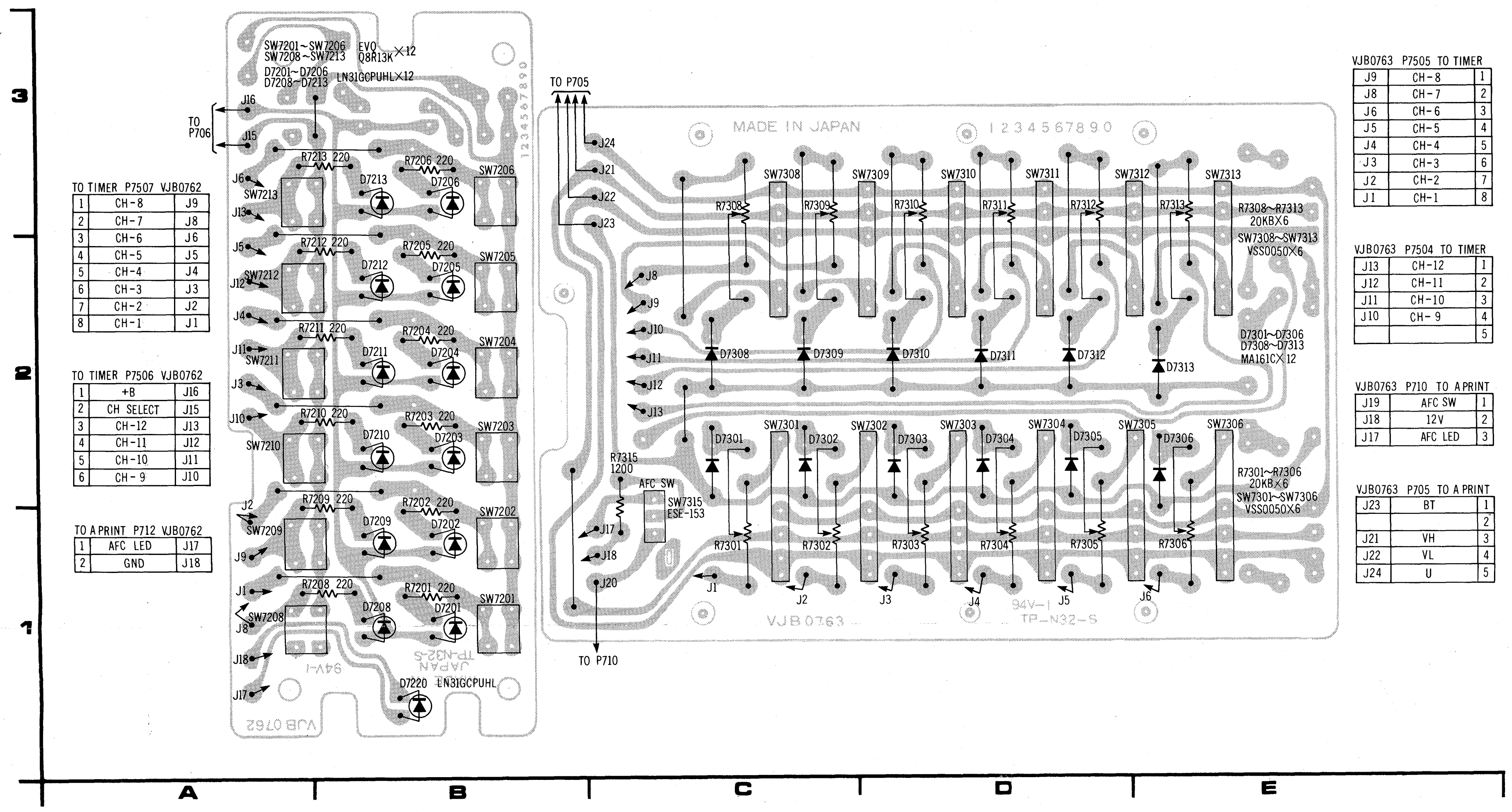
3	REC REQUEST
2	TIMER ON
1	TIMER SET

PROGRAMMABLE TIMER SCHEMATIC DIAGRAM


SW7501 ES014123
PRO
NOR
CLO
SW7502 PRO UP
SW7505 DAY UP
SW7506 DAY DOWN
SW7507 HOUR UP
SW7508 HOUR DOWN
SW7509 MIN UP
SW7510 MIN DOWN
SW7503 ON
SW7504 OFF
EVOPXR04KX9
SW7511 BRI
ES014125 DIM
D7629 MA150 1SS53
P7510
3 ⊖ 45V
2 BRIDIM
1 MODESEL
R7645 100K
P7509
10 KEY SEL
9 DAY UP
8 DAY DOWN
7 HOUR UP
6 HOUR DOWN
5 MIN UP
4 MIN DOWN
3 ON
2 OFF
1 PRO UP
R7610 12K
R7602
R7603
R7604
D7627
MA165×2
D7628
R7607
R7608
R7609
R7601
R7601～R7604
R7607～R7609
39K ×8
RX7608 EXBP88103M 10KX8
Q7603
2SD636
2SC1684
R7616 1K
R7615 1K
R7617 12K
R7611 10K
R7612 12K
Q7602 2SD636 2SC1684
R7614 1K
R7613 1K
R7571 1K
C7510 10V220
D7622 MA150 MA165 1SS53
D7538 MA522
R7572 3300
R7574 5K6
R7573 12K
Q7531 2SD636 (R.S.T) 2SC1684 (R.S.T)
R7541 12K
D7519 MA150 MA165 1SS53
R7631 12K
D7615 MA150 MA165
Q7601 2SD636 2SC1684
P7505
8 CH1
7 CH2
6 CH3
5 CH4
4 CH5
3 CH6
2 CH7
1 CH8
IC7504 DN852
D7601～D7608 MA161×8
P7504
5
4 CH9
3 CH10
2 CH11
1 CH12
P7507
8 CH1
7 CH2
6 CH3
5 CH4
4 CH5
3 CH6
2 CH7
1 CH8
IC7503 DN852
D7611～D7614 MA161×4
P7506
6 CH9
5 CH10
4 CH11
3 CH12
2 CH SELECT
1 +B
G
N.C
E
D
C
B
A
Vcc
IC7506 MN1405VM
OSC
VDD
DO7
DO6
DO5
DO4
DO3
DO2
DO1
DO0
SNS1
SNS0
CSLCT
RST
TST
EO3
EO2
EO1
EO0
B10
VSS
CO11
CO10
CO9
CO8
CO7
CO6
CO5
CO4
CO3
CO2
CO1
CO0
A13
A12
A11
A10
B13
B12
B11
R7540 12K
D7616 MA150 MA165 1SS53
R7624 1K
R7623 1K
D7617 MA150 MA165 1SS53
R7625 2200
D7618 MA150 MA165 1SS53
CM3
CM2
CM1
CM0
VSS
DO0
DO1
DO2
DO3
R7618 22K
Q7604 2SD636 2SC1684
Q7519 2SA564 2SB641
R7635 1K
C7605 1000P
R7546 680
R7545 2200
D7624 MA26 WO-B
RX7602 EXBP88103M 10K×8
IC7502 DN852
R7503 2700
C7501 6V100
R7502 10K
R7501 3300
D7517 MA150 MA165 1SS53
Q7605 2SD638 2SC1317
R7636 4.7
Q7501 2SA1023 (P.Q)
R7639 390 (½W)
RX7603 EXBP85273M 27K×5
R7509 27K
R7511 27K
R7513 27K
R7515 27K
IC760
TA57
R7504 27K
R7505 27K
Q7502 2SA1023 (P.Q)
R7642 220
RX7601 EXBP88103M 10K×5
IC7501 DN852
R7506 27K
R7507 27K
Q7503 2SA1023 (P.Q)
R7569 27K
R7567 4700
Q7606 2SD636 2SC1684
R7621 22K
C7601 50V1
R7568 10K
R7633 22K
R7622 330
Q7530 2SD636 2SC1684
R7620 33K
D7626 MA150 1SS53
R7640 100K
R7641 3300
P709
1 CHLOCK
2 CH. UP
3 TUNER Ⓗ
4 GND
5 AFCDEF
6 TIMER LED
7
8 12V Ⓑ
Q7608 2SB641 2SA564
Q7609 2SD636 (R.S.T) 2SC1684 (R.S.T)
9
8
7
6
5
4
3
2
1
A
B
C
D
E
F
G


Q7532
2SD638 (R.S.T)
2SC1317 (R.S.T)
Q7533
2SC1384 (Q)
L7501
100μ
EM
ERB-12-01
10E1
T7501
C7516
6V100
D7535
MA150
MA165
1SS53
R7570
180
F7601
T1A
P7503
BAT ⊕
BAT ⊖
VFA0017
C7510
10V220
C7511
0.01
C7503
0.01
D7621
MA150
MA165
1SS53
R7575
5600
R7576
5600
C7513
16V22
C7512
10V220
R7643
100
D7542
QA107R
RD6.8EB
D7540
RD5.1JB
C7515
470P
R7577
330
R7638
5.6
C7604
47P
P7502
TIMER SET
TIMER ON
REC REQVEST
R7579
4700
C7514
16V10
D7541
RD8.2JB
Q7534
2SD636 (R.S.T)
2SC1684 (R.S.T)
D7623
MA150
MA165
1SS53
C7606
16V22
D7544
RD15EB
R7644
100K
P7501
6V
12V
⊖45V
(AC3V)
GND
R7578 1K
D7545
RD30EB
D7536
EMIZ
ERB-12-01
D7546
RD10EB
R7582
560
R7581
560
P7508
AC3V
AC3V
R7626
1K
R7627
4700
X7501
4.19MHz
C7505
20P
C7521
5P
C7504
15P
IC7507
MN1206A
CM3
CM2
CM1
CM0
VSS
DO0
DO1
DO2
DO3
LDC
CEC
XO
XI
CIO
CNT
TST
SDD
VDD
R7628
4700
R7629
4700
IC7505
MN1400VL
BI1
BI2
BI3
AI0
AI1
AI2
AI3
CO0
CO1
CO2
CO3
CO4
CO5
CO6
CO7
CO8
CO9
CO10
CO11
VSS
BI0
EO0
EO1
EO2
EO3
TST
RST
CSLCT
SNS0
SNS1
DO0
DO1
DO2
DO3
DO4
DO5
DO6
DO7
VDD
OSC
D7620
MA150
MA165
1SS53
D7619
MA150
MA165
1SS53
D7618
MA150
MA165
1SS53
C7502
50V1
D7518
MA165
C7602
0.01
C7603
10V100
D7543
EMIZ
ERB-12-01
R7509
27K
R7511
27K
R7513
27K
R7515
27K
R7517
27K
RX7604
EXBP85273M
27K×5
R7519
27K
R7521
27K
R7523
27K
R7525
27K
R7527
27K
RX7605
EXBP85273M
27K×5
R7529
27K
R7531
27K
R7533
27K
R7535
27K
R7537
27K
IC7601
TA57
IC7602
TA57
IC7603
TA57
RX7607
EXBP
85473M
47K×5
RX7606
EXBP812473M
47K×12
TP7501
00
SUN
MON
TUE
WED
THR
FRI
SAT
ON
OFF
AM
PM
1
2
3
4
5
6
7
W
DP7501
VSL0003
G
H
I
J
K
L
M

NV-7000-E
CHANNEL INDICATOR & CHANNEL SELECT CIRCUIT BOARD (VEP0762A/VEP0763A)


SW7201~SW7206 EVQ Q8R13K ×12
SW7208~SW7213
D7201~D7206 LN31GCPUHL×12
D7208~D7213
TO P706
J16
J15
TO P705
J24
J21
J22
J23
MADE IN JAPAN
1234567890
SW7213
SW7212
SW7211
SW7210
SW7209
SW7208
SW7206
SW7205
SW7204
SW7203
SW7202
SW7201
D7220 LN31GCPUHL
VJB0762
94V-I
TP-N32-S
JAPAN
SW7308
SW7309
SW7310
SW7311
SW7312
SW7313
R7308~R7313 20KBX6
SW7308~SW7313 VSS0050X6
D7301~D7306
D7308~D7313
MA161CX12
SW7301
SW7302
SW7303
SW7304
SW7305
SW7306
R7301~R7306 20KBX6
SW7301~SW7306 VSS0050X6
R7315 1200
AFC SW
SW7315 ESE-153
TO P710
VJB0763
94V-I
TP-N32-S
A
B
C
D
E
1
2
3

TO TIMER P7507 VJB0762

1	CH-8	J9
2	CH-7	J8
3	CH-6	J6
4	CH-5	J5
5	CH-4	J4
6	CH-3	J3
7	CH-2	J2
8	CH-1	J1

TO TIMER P7506 VJB0762

1	+B	J16
2	CH SELECT	J15
3	CH-12	J13
4	CH-11	J12
5	CH-10	J11
6	CH-9	J10

TO A PRINT P712 VJB0762

1	AFC LED	J17
2	GND	J18

VJB0763 P7505 TO TIMER

J9	CH-8	1
J8	CH-7	2
J6	CH-6	3
J5	CH-5	4
J4	CH-4	5
J3	CH-3	6
J2	CH-2	7
J1	CH-1	8

VJB0763 P7504 TO TIMER

J13	CH-12	1
J12	CH-11	2
J11	CH-10	3
J10	CH-9	4
		5

VJB0763 P710 TO A PRINT

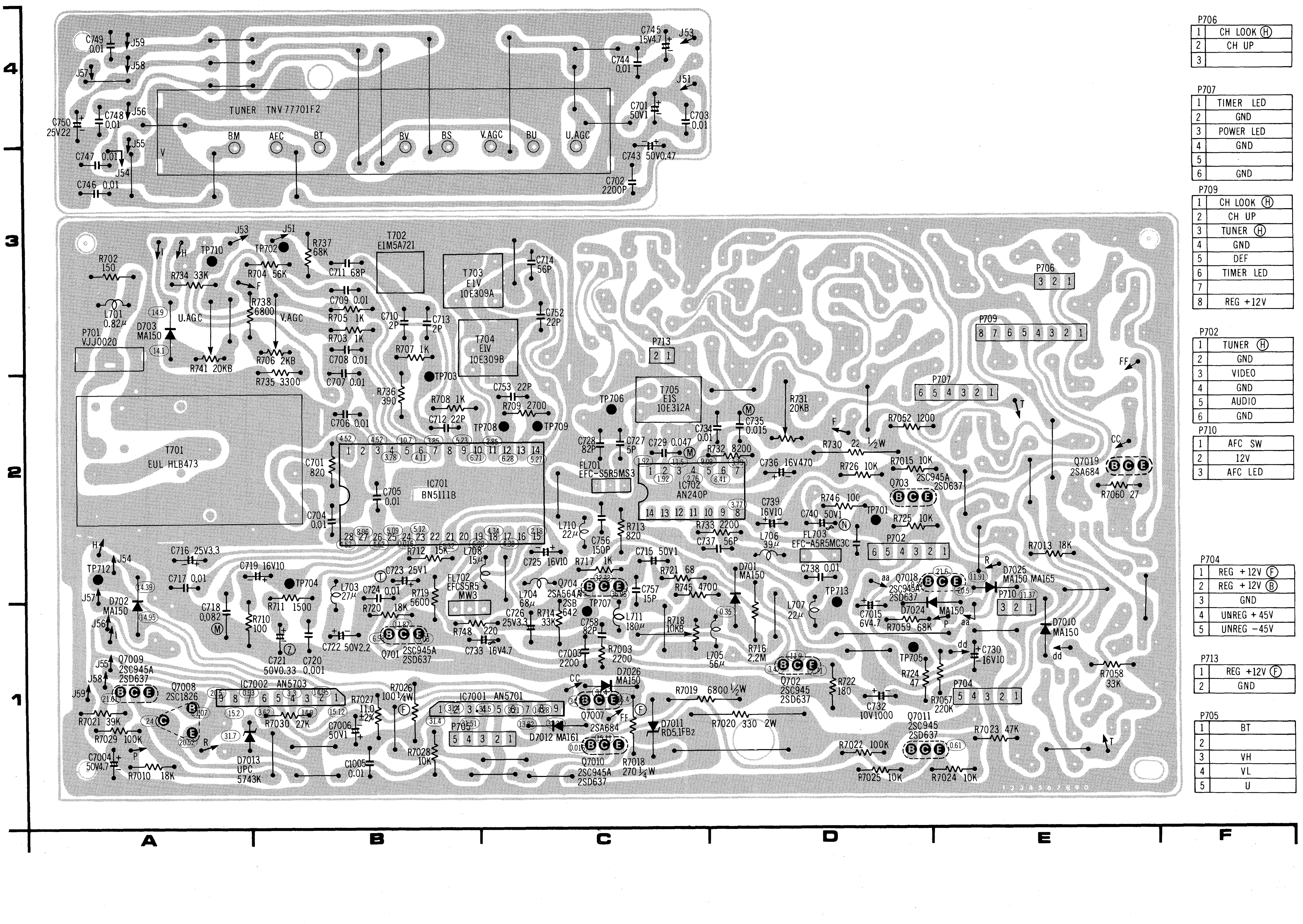
J19	AFC SW	1
J18	12V	2
J17	AFC LED	3

VJB0763 P705 TO A PRINT

J23	BT	1
		2
J21	VH	3
J22	VL	4
J24	U	5

Demodulator C.B.A.	
Q701	B-1
Q702	D-1
Q703	D-2
Q707	C-2
Q7003	A-1
Q7007	C-1
Q7009	A-1
Q7010	C-1
Q7011	D-1
Q7018	E-2
Q7019	E-2

NV-7000-E
TV DEMODULATOR & TUNER CIRCUIT BOARD (VEP0757A/VEP0758A)


TUNER TNV77701F2
BM
AFC
BT
BV
BS
V.AGC
BU
U.AGC
T701 EUL HLB473
T702 ELM5A721
T703 EIV 10E309A
T704 EIV 10E309B
T705 EIS 10E312A
IC701 BN5111B
IC702 AN240P
IC7001 AN5701
IC7002 AN5703
FL701 EFC-55R5MS3
FL702 EFC55R5MW3
FL703 EFC-A5R5MC3C
P701 VJJ0020
P702
P704
P705
P706
P707
P709
P713
Q701 2SC945A 2SD637
Q702 2SC945 2SD637
Q703 2SC945A 2SD637
Q7009 2SC945A 2SD637
Q7008 2SC1826
Q7007 2SA684
Q7010 2SC945A 2SD637
Q7011 2SC945 2SD637
Q7018 2SC945A 2SD637
Q7019 2SA684
D7013 UPC 5743K
D7011 RD5.1FB2
D7012 MA161
D7025 MA150 MA165
D7010 MA150
D703 MA150
D702 MA150
D701 MA150
TP701
TP702
TP703
TP704
TP705
TP706
TP707
TP708
TP709
TP710
TP712
TP713
A
B
C
D
E
F
1
2
3
4

P706

1	CH LOOK Ⓗ
2	CH UP
3	

P707

1	TIMER LED
2	GND
3	POWER LED
4	GND
5	
6	GND

P709

1	CH LOOK Ⓗ
2	CH UP
3	TUNER Ⓗ
4	GND
5	DEF
6	TIMER LED
7	
8	REG +12V

P702

1	TUNER Ⓗ
2	GND
3	VIDEO
4	GND
5	AUDIO
6	GND

P710

1	AFC SW
2	12V
3	AFC LED

P704

1	REG +12V Ⓕ
2	REG +12V Ⓑ
3	GND
4	UNREG +45V
5	UNREG −45V

P713

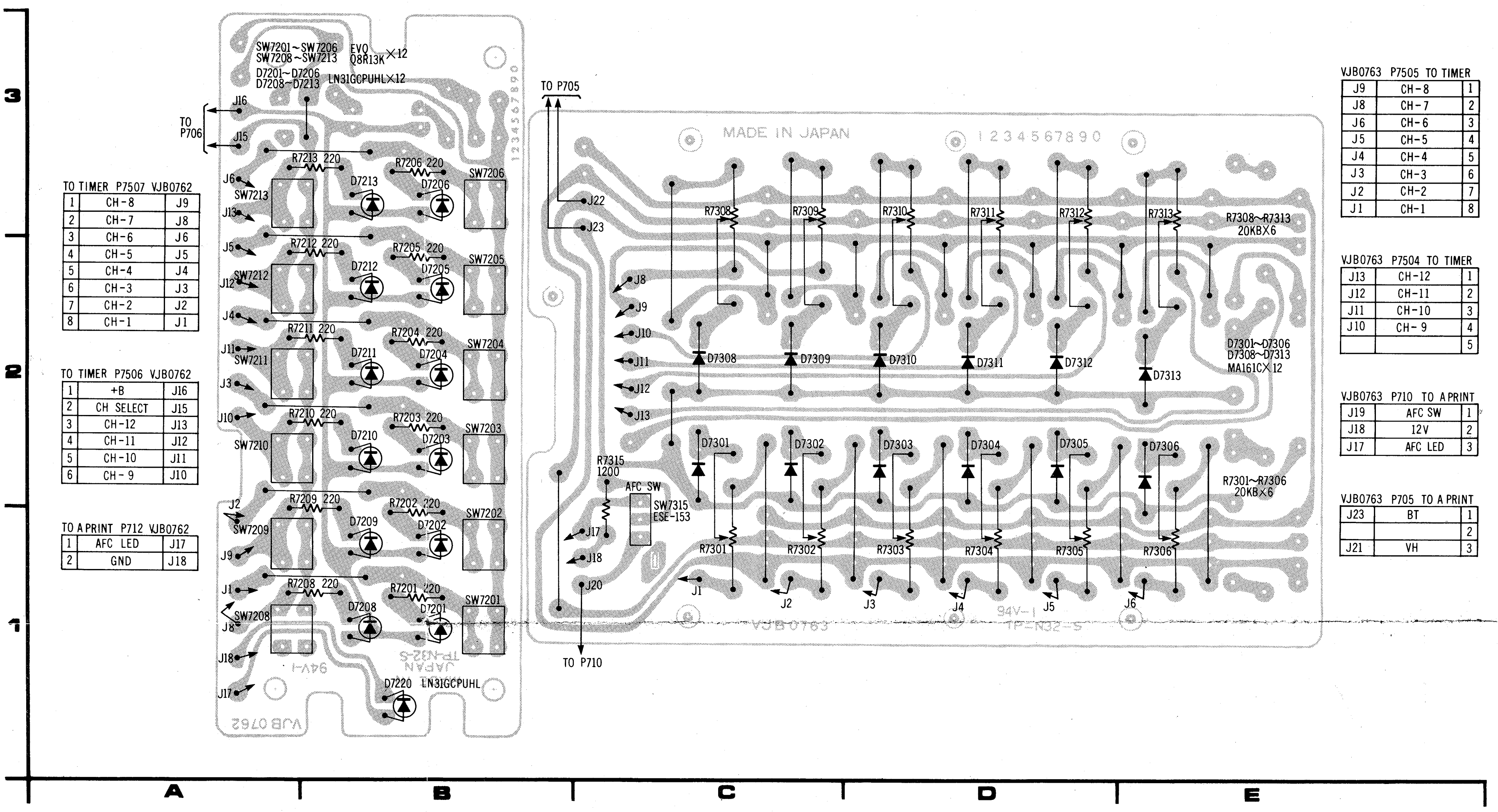
1	REG +12V Ⓕ
2	GND

P705

1	BT
2	
3	VH
4	VL
5	U

NV-7000-B

A) CHANNEL INDICATOR & CHANNEL SELECT CIRCUIT BOARD (VEP0762A/VEP0763B)


SW7201~SW7206
SW7208~SW7213 EVQ Q8R13K ×12
D7201~D7206
D7208~D7213 LN31GCPUHL×12
TO P706
TO P705
TO P710
MADE IN JAPAN
1234567890
R7308~R7313 20KBX6
D7301~D7306
D7308~D7313
MA161C×12
R7301~R7306 20KB×6
R7315 1200
AFC SW
SW7315 ESE-153
D7220 LN31GCPUHL
VJB0762
VJB0763
94V-1
TP-N32-S
JAPAN
A
B
C
D
E
1
2
3

TO TIMER P7507 VJB0762

1	CH-8	J9
2	CH-7	J8
3	CH-6	J6
4	CH-5	J5
5	CH-4	J4
6	CH-3	J3
7	CH-2	J2
8	CH-1	J1

TO TIMER P7506 VJB0762

1	+B	J16
2	CH SELECT	J15
3	CH-12	J13
4	CH-11	J12
5	CH-10	J11
6	CH-9	J10

TO A PRINT P712 VJB0762

1	AFC LED	J17
2	GND	J18

VJB0763 P7505 TO TIMER

J9	CH-8	1
J8	CH-7	2
J6	CH-6	3
J5	CH-5	4
J4	CH-4	5
J3	CH-3	6
J2	CH-2	7
J1	CH-1	8

VJB0763 P7504 TO TIMER

J13	CH-12	1
J12	CH-11	2
J11	CH-10	3
J10	CH-9	4
		5

VJB0763 P710 TO A PRINT

J19	AFC SW	1
J18	12V	2
J17	AFC LED	3

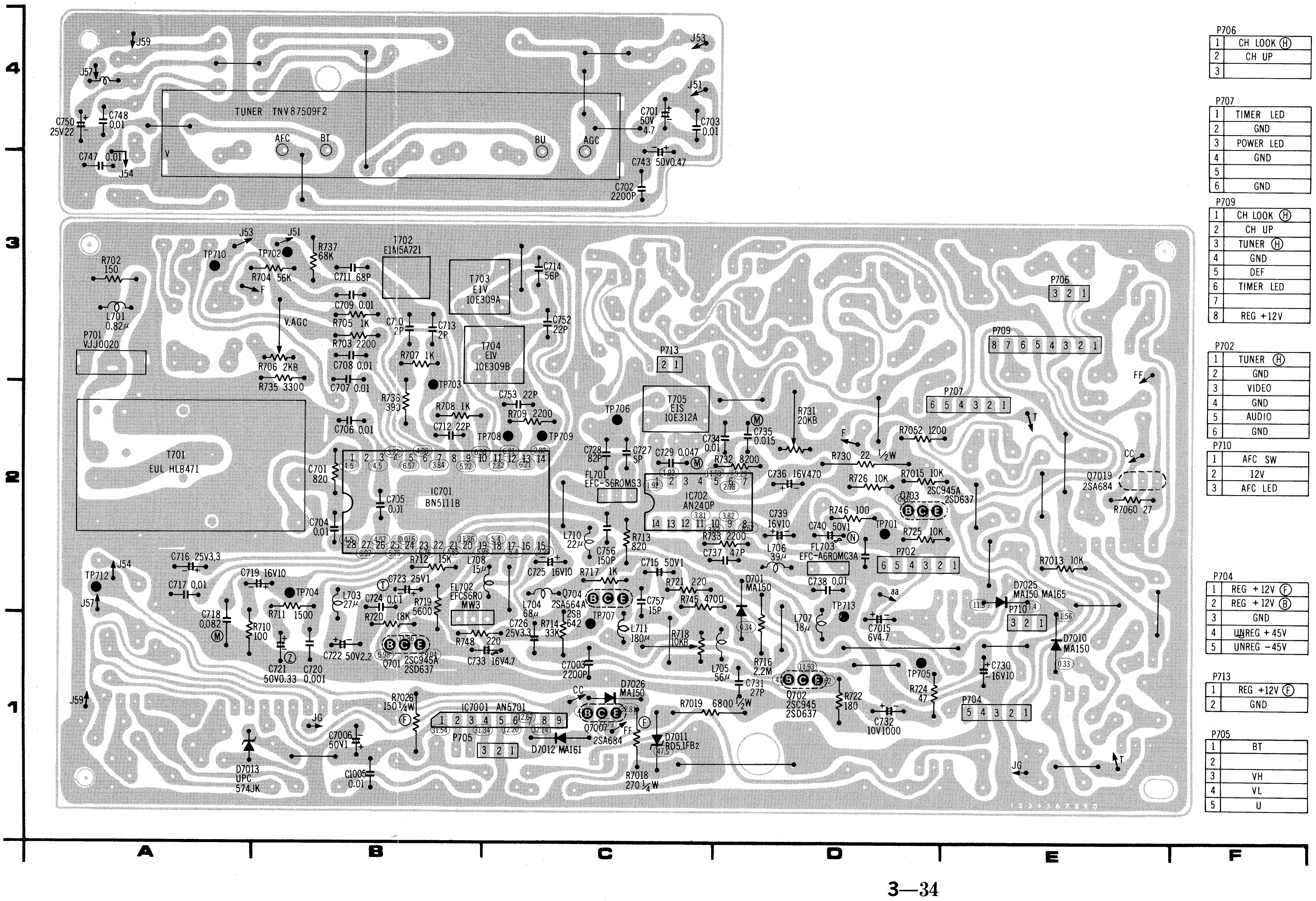
VJB0763 P705 TO A PRINT

J23	BT	1
		2
J21	VH	3

Demodulator C.B.A.	
Q701	B-1
Q702	D-1
Q703	D-2
Q707	D-2
Q7007	C-1
Q7019	E-2

NV-7000-B

TV DEMODULATOR & TUNER CIRCUIT BOARD (VEP0757B/VEP0758B)


TUNER TNV87509F2
AFC
BT
BU
AGC
T701 EUL HLB471
IC701 BN5111B
IC702 AN240P
IC7001 AN5701
T702 E1B15A721
T703 EIV 10E309A
T704 EIV 10E309B
T705 EIS 10E312A
FL701 EFC-S6R0MS3
FL702 EFCS6R0 MW3
FL703 EFC-A6R0MC3A
P701 VJJ0020
V.AGC
Q701 2SC945A 2SD637
Q702 2SC945 2SD637
Q703 2SC945A 2SD637
Q704 2SA564A 2SB642
Q7007 2SA684
Q7019 2SA684
D7013 UPC 574JK
D7011 RD5.1FB2
D7026 MA150
D7025 MA150 MA165
D7010 MA150
D7012 MA161
D701 MA150
A
B
C
D
E
F
1
2
3
4

P706

1	CH LOOK Ⓗ
2	CH UP
3	

P707

1	TIMER LED
2	GND
3	POWER LED
4	GND
5	
6	GND

P709

1	CH LOOK Ⓗ
2	CH UP
3	TUNER Ⓗ
4	GND
5	DEF
6	TIMER LED
7	
8	REG +12V

P702

1	TUNER Ⓗ
2	GND
3	VIDEO
4	GND
5	AUDIO
6	GND

P710

1	AFC SW
2	12V
3	AFC LED

P704

1	REG +12V Ⓕ
2	REG +12V Ⓑ
3	GND
4	UNREG +45V
5	UNREG -45V

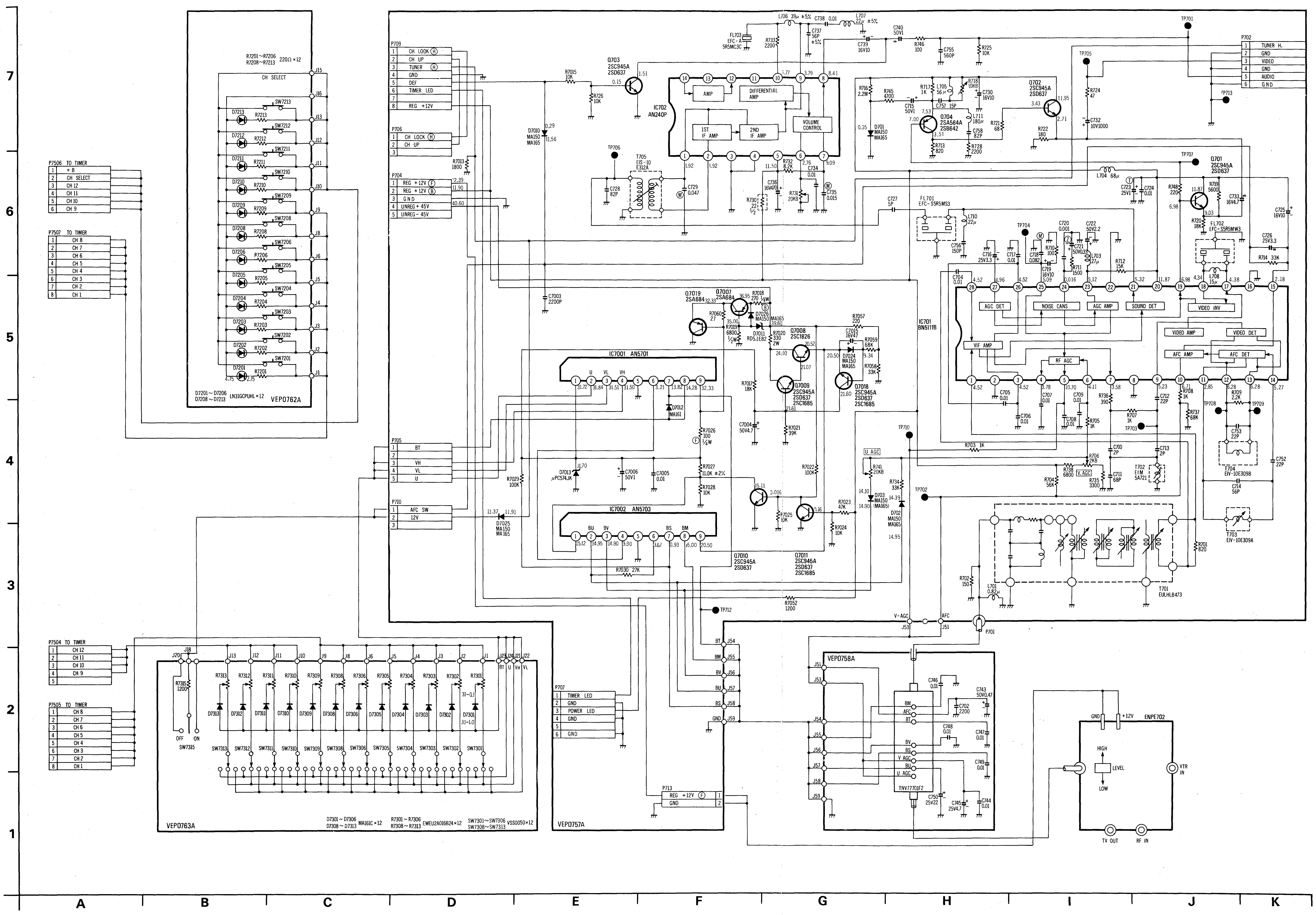
P713

1	REG +12V Ⓕ
2	GND

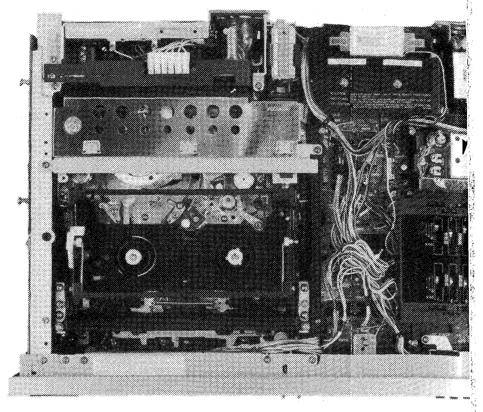
P705

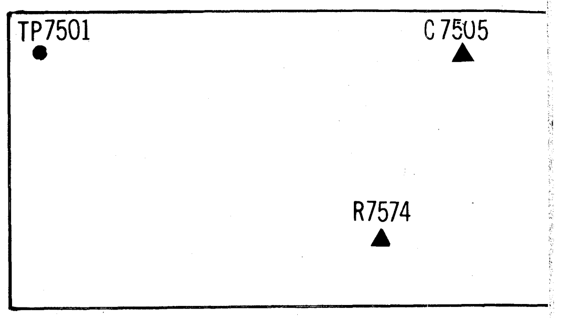
1	BT
2	
3	VH
4	VL
5	U

NV-7000-E TV DEMODULATOR SCHEMATIC DIAGRAM (VEQ0198)


P709
CH LOOK (H)
CH UP
TUNER (H)
GND
DEF
TIMER LED
REG +12V
P706
CH LOCK (H)
CH UP
P704
REG +12V (F)
REG +12V (B)
GND
UNREG + 45V
UNREG − 45V
P705
BT
VH
VL
U
P710
AFC SW
12V
Q703 2SC945A 2SD637
IC702 AN240P
AMP
DIFFERENTIAL AMP
1ST IF AMP
2ND IF AMP
VOLUME CONTROL
T705 EIS-10 E312A
FL703 EFC-A 5R5MC3C
L706 39µ ±5%
C738 0.01
L707 22µ ±5%
Q704 2SA564A 2SB642
Q702 2SC945A 2SD637
Q701 2SC945A 2SD637
FL701 EFC-S5R5MS3
FL702 EFC-S5R5MW3
L704 68µ
TP701
TP704
TP705
TP706
TP707
TP713
P702
TUNER H.
GND
VIDEO
GND
AUDIO
GND
IC701 BN5111B
AGC DET
NOISE CANS
AGC AMP
SOUND DET
VIDEO INV
VIDEO AMP
VIDEO DET
VIF AMP
RF AGC
AFC AMP
AFC DET
T701 EUILHL8473
T702 EIM 5A721
T703 EIV-10E309A
T704 EIV-10E309B
IC7001 AN5701
IC7002 AN5703
Q7019 2SA684
Q7007 2SA684
Q7008 2SC1826
Q7009 2SC945A 2SD637 2SC1685
Q7018 2SC945A 2SD637 2SC1685
Q7010 2SC945A 2SD637
Q7011 2SC945A 2SD637 2SC1685
D7013 µPC574J
TP710
TP702
TP703
TP708
TP709
TP712
V-AGC
AFC
P701
P7506 TO TIMER
+B
CH SELECT
CH 12
CH 11
CH 10
CH 9
P7507 TO TIMER
CH 8
CH 7
CH 6
CH 5
CH 4
CH 3
CH 2
CH 1
R7201～R7206 R7208～R7213 220Ω×12
CH SELECT
SW7201～SW7213
D7201～D7206 D7208～D7213 LN31GCPUHL×12
VEP0762A
P7504 TO TIMER
CH 12
CH 11
CH 10
CH 9
P7505 TO TIMER
CH 8
CH 7
CH 6
CH 5
CH 4
CH 3
CH 2
CH 1
OFF ON
SW7315
D7301～D7306 D7308～D7313 MA161C×12
R7301～R7306 R7308～R7313 EWEU2A016B24×12
SW7301～SW7306 SW7308～SW7313 VSS0050×12
VEP0763A
P707
TIMER LED
GND
POWER LED
GND
GND
VEP0757A
P713
REG +12V (F)
GND
BT
BM
BV
BU
BS
GND
J54
J55
J56
J57
J58
J59
VEP0758A
TNV7701F2
J51
J53
ENPE702
GND
+12V
HIGH
LEVEL
LOW
VTR IN
TV OUT
RF IN
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K

TV Demodulator Board




TP7501
C7505
R7574

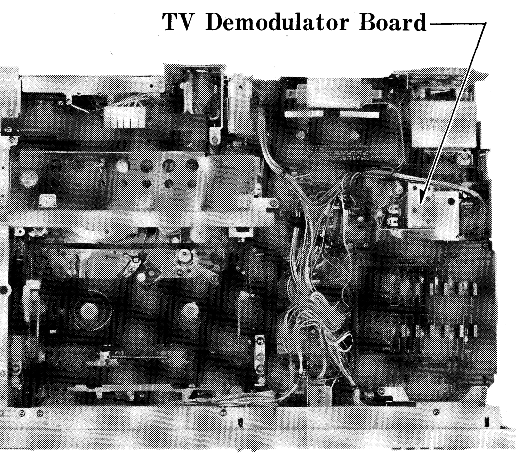
P702 (TV Demodulator C.B.A)			
PIN NO.	SIGNAL NAME	DESTINAT	
1	Tuner (H)	P3004-1	Luminance & C
2	GND	—	—
3	Video OUT	P3004-3	Luminance & C
4	GND	—	—
5	Audio OUT	P3004-5	Luminance & C
6	—	—	—

P704 (TV Demodulator C.B.A)			
PIN NO.	SIGNAL NAME	DESTINAT	
1	(F) 12V	P1002-6	Power Supply
2	12V	P1004-4	Power Supply
3	GND	P1005-6	Power Supply
4	Unreg. +45V	P1507-3	Power, Timer N
5	Unreg. −45V	—	—

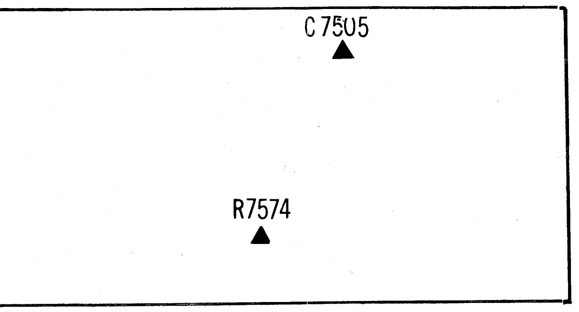
P706 (TV Demodulator C.B.A)			
PIN NO.	SIGNAL NAME	DESTINAT	
1	CH Lock (H)	P6201-2	System Control
2	CH UP	P6402-2	Control & Sub S
3	Play/Dub (H)	P6201-1	System Control

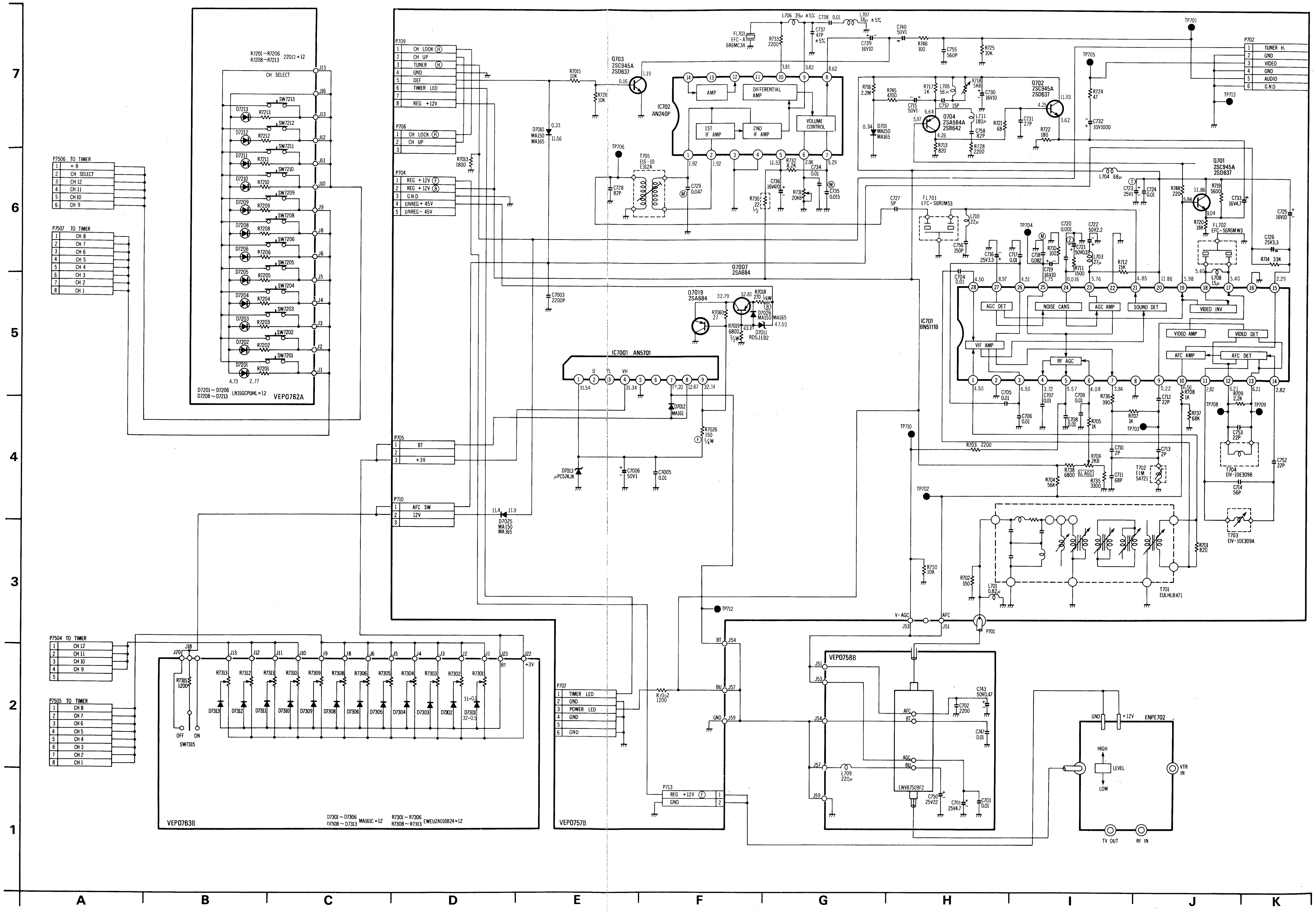
P707 (TV Demodulator C.B.A)			
PIN NO.	SIGNAL NAME	DESTINATI	
1	Tuner LED	D1504	Tuner LED
2	GND	D1504	Tuner LED
3	Power LED	D1503	Power LED
4	GND	D1503	Power LED
5	—	—	—
6	GND	D1505	Audio NR LED

P709 (TV Demodulator C.B.A)			
PIN NO.	SIGNAL NAME	DESTINATI	
1	CH Lock	—	Timer
2	CH UP	—	Timer
3	Tuner (H)	—	Timer
4	GND	—	Timer
5	AFC DEF	—	Timer
6	Timer LED	—	Timer
7	—	—	Timer
8	12V	—	Timer


TV Demodulator Board

NV-7000-B TV DEMODULATOR SCHEMATIC DIAGRAM (VEQ0199)


C7505
R7574


7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K
P7506 TO TIMER
+8
CH SELECT
CH 12
CH 11
CH 10
CH 9
P7507 TO TIMER
CH 8
CH 7
CH 6
CH 5
CH 4
CH 3
CH 2
CH 1
CH SELECT
VEP0762A
D7201~D7206 D7208~D7213 LN31GCPUHL×12
P709
CH LOOK (H)
CH UP
TUNER (H)
GND
DEF
TIMER LED
REG +12V
P706
CH LOCK (H)
CH UP
P704
REG +12V (F)
REG +12V (B)
GND
UNREG +45V
UNREG -45V
P705
BT
+3V
P710
AFC SW
12V
Q703 2SC945A 2SD637
IC702 AN240P
AMP
DIFFERENTIAL AMP
1ST IF AMP
2ND IF AMP
VOLUME CONTROL
Q704 2SA564A 2SB642
Q702 2SC945A 2SD637
Q701 2SC945A 2SD637
IC701 BN5111B
AGC DET
NOISE CANS
AGC AMP
SOUND DET
VIDEO INV
VIDEO AMP
VIDEO DET
AFC AMP
AFC DET
VIF AMP
RF AGC
IC7001 AN5701
Q7007 2SA684
Q7019 2SA684
FL701 EFC-S6R0MS3
FL702 EFC-S6R0MW3
FL703 EFC-A 6R6MC3A
T701 EUL HLB471
T702 EIM 5A721
T703 EIV-10E309A
T704 EIV-10E309B
T705 EIS-10 E312A
P702
TUNER H.
GND
VIDEO
GND
AUDIO
GND
TP701
TP702
TP703
TP704
TP705
TP706
TP708
TP709
TP710
TP712
TP713
V-AGC
AFC
P701
P7504 TO TIMER
CH 12
CH 11
CH 10
CH 9
P7505 TO TIMER
CH 8
CH 7
CH 6
CH 5
CH 4
CH 3
CH 2
CH 1
OFF
ON
SW7315
VEP0763B
D7301~D7306 D7308~D7313 MA161C×12
R7301~R7306 R7308~R7313 EWEU2A016B24×12
P707
TIMER LED
GND
POWER LED
GND
GND
VEP0757B
P713
REG +12V (F)
GND
VEP0758B
ENV87509F2
ENPE702
HIGH
LOW
LEVEL
VTR IN
TV OUT
RF IN

P702 (TV Demodulator C.B.A)		
SIGNAL NAME	DESTINATION	
Tuner (H)	P3004-1	Luminance & Chrominance
GND	—	—
Video OUT	P3004-3	Luminance & Chrominance
GND	—	—
Audio OUT	P3004-5	Luminance & Chrominance
—	—	—

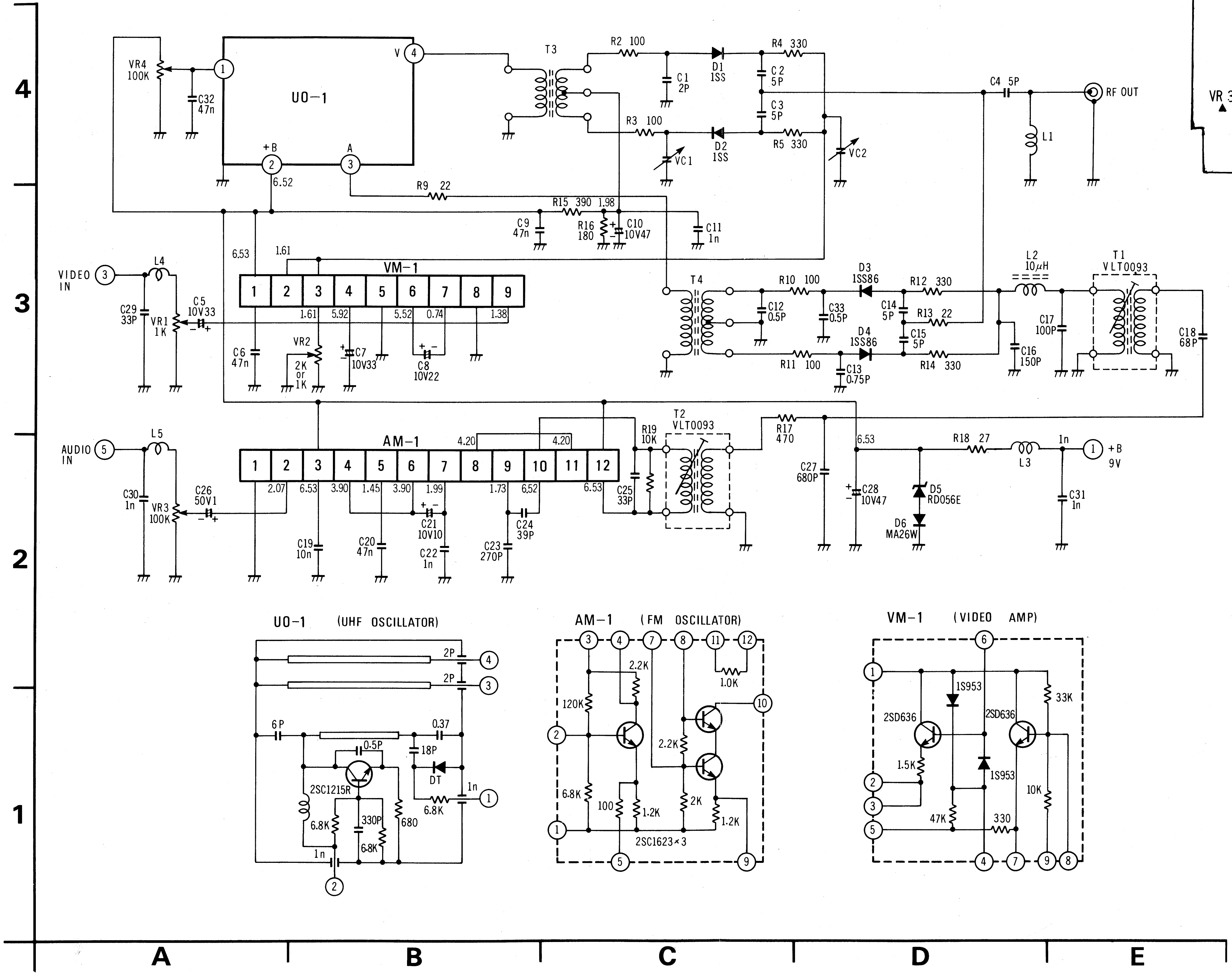
P704 (TV Demodulator C.B.A)		
SIGNAL NAME	DESTINATION	
(F) 12V	P1002-6	Power Supply
12V	P1004-4	Power Supply
GND	P1005-6	Power Supply
Unreg. +45V	P1507-3	Power, Timer NR, Select SW
Unreg. −45V	—	—

P706 (TV Demodulator C.B.A)		
SIGNAL NAME	DESTINATION	
CH Lock (H)	P6201-2	System Control II
CH UP	P6402-2	Control & Sub System Control
Play/Dub (H)	P6201-1	System Control II

P707 (TV Demodulator C.B.A)		
SIGNAL NAME	DESTINATION	
Tuner LED	D1504	Tuner LED
GND	D1504	Tuner LED
Power LED	D1503	Power LED
GND	D1503	Power LED
—	—	—
GND	D1505	Audio NR LED

P709 (TV Demodulator C.B.A)		
SIGNAL NAME	DESTINATION	
CH Lock	—	Timer
CH UP	—	Timer
Tuner (H)	—	Timer
GND	—	Timer
AFC DEF	—	Timer
Timer LED	—	Timer
—	—	Timer
12V	—	Timer

RF CONVERTER SCHEMATIC DIAGRAM



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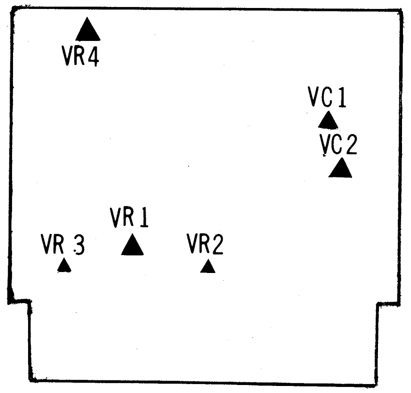
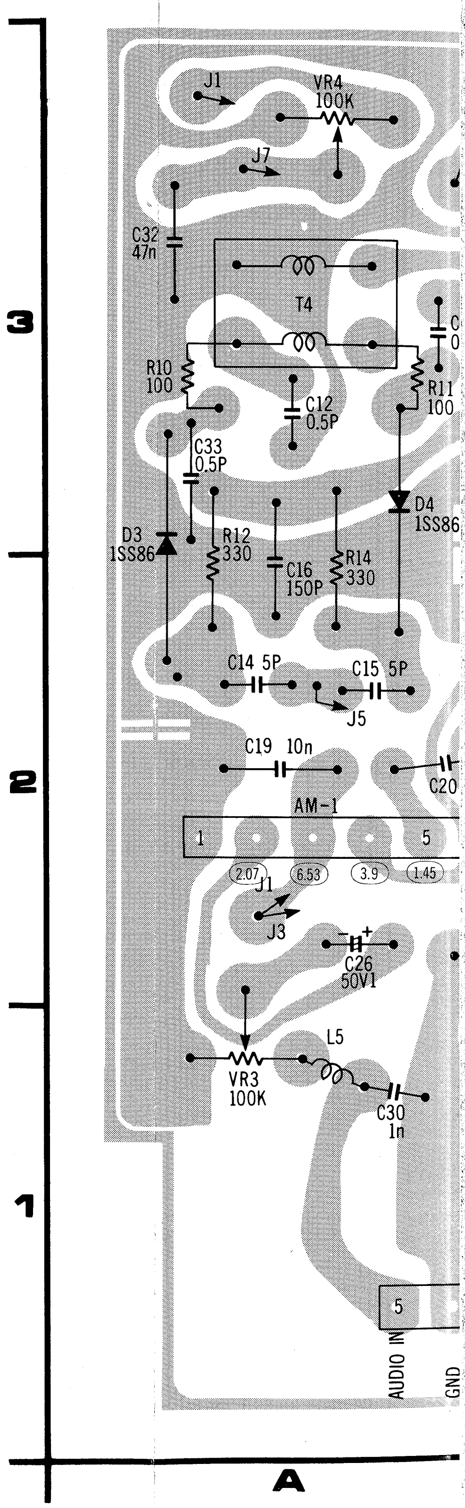
E
UO-1
VR4 100K
C32 47n
+B
6.52
T3
R2 100
C1 2P
D1 1SS
R4 330
C2 5P
C3 5P
R3 100
D2 1SS
R5 330
VC1
VC2
C4 5P
RF OUT
L1
R9 22
R15 390
1.98
C9 47n
R16 180
C10 10V47
C11 1n
VIDEO IN
L4
C29 33P
VR1 1K
C5 10V33
6.53
1.61
VM-1
5.92
5.52
0.74
1.38
C6 47n
VR2 2K or 1K
C7 10V33
C8 10V22
T4
R10 100
D3 1SS86
R12 330
L2 10μH
T1 VLT0093
C12 0.5P
C33 0.5P
C14 5P
R13 22
C15 5P
C17 100P
C18 68P
R11 100
D4 1SS86
C13 0.75P
R14 330
C16 150P
AUDIO IN
L5
C30 1n
VR3 100K
C26 50V1
AM-1
4.20
2.07
6.53
3.90
1.45
3.90
1.99
1.73
6.52
6.53
R19 10K
T2 VLT0093
C25 33P
R17 470
C27 680P
C28 10V47
R18 27
L3
1n
+B 9V
D5 RD056E
D6 MA26W
C31 1n
C19 10n
C20 47n
C21 10V10
C22 1n
C23 270P
C24 39P
UO-1 (UHF OSCILLATOR)
2P
2P
6P
0.37
0.5P
18P
DT
1n
2SC1215R
6.8K
330P
6.8K
680
6.8K
1n
AM-1 (FM OSCILLATOR)
2.2K
120K
2.2K
1.0K
6.8K
100
1.2K
2K
1.2K
2SC1623×3
VM-1 (VIDEO AMP)
1S953
2SD636
2SD636
33K
1.5K
1S953
10K
47K
330



VR4
VC1
VC2
VR 3
VR1
VR2

RF CONVERTER



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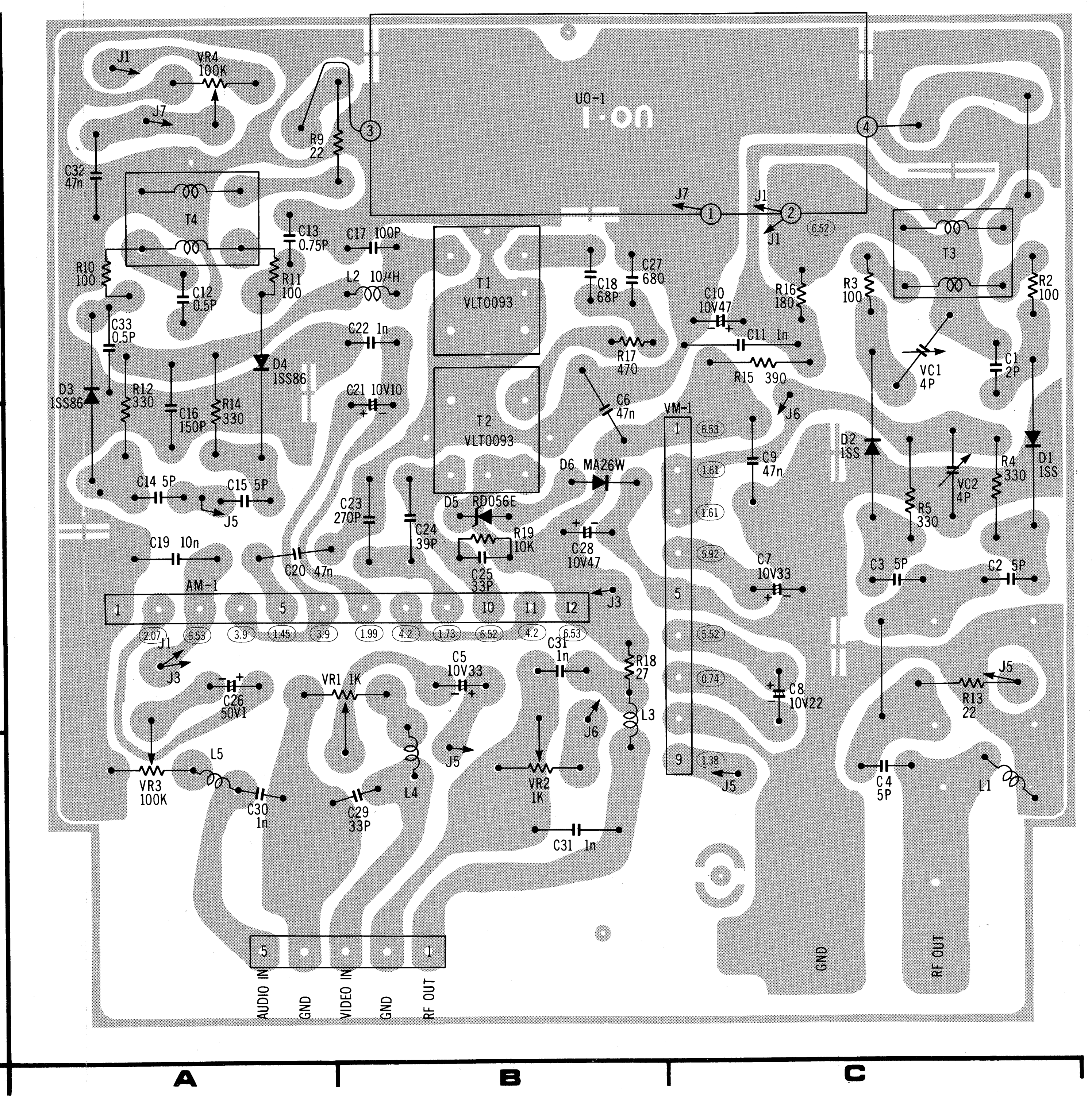
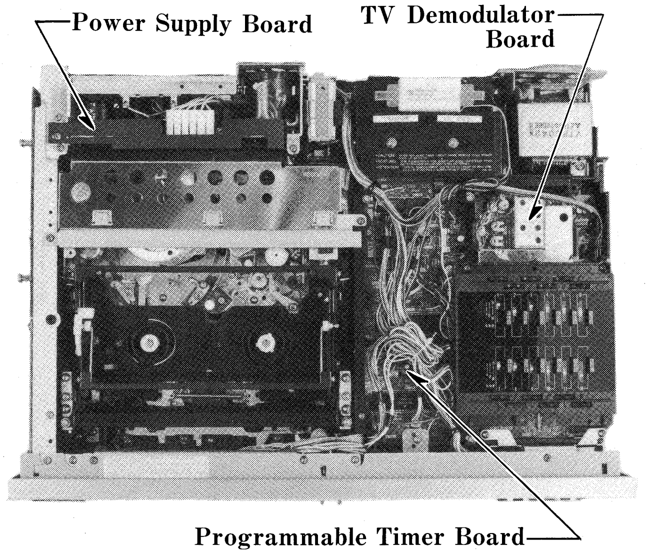
J1
VR4 100K
J7
C32 47n
T4
R10 100
R11 100
C12 0.5P
C33 0.5P
D4 1SS86
D3 1SS86
R12 330
C16 150P
R14 330
C14 5P
C15 5P
J5
C19 10n
C20
AM-1
1
5
2.07
6.53
3.9
1.45
J1
J3
C26 50V1
L5
VR3 100K
C30 1n
5
AUDIO IN
GND

RF CONVERTER CIRCUIT BOARD (ENC17351/ENC17352)

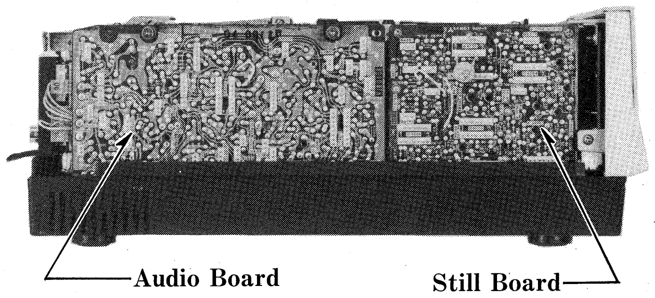

UO-1
J1
VR4 100K
J7
R9 22
C32 47n
T4
C13 0.75P
C17 100P
L2 10μH
C22 1n
C21 10V10
R10 100
C12 0.5P
R11 100
C33 0.5P
D4 1SS86
D3 1SS86
R12 330
C16 150P
R14 330
C14 5P
C15 5P
J5
C19 10n
C20 47n
C23 270P
C24 39P
T1 VLT0093
T2 VLT0093
D5 RD056E
R19 10K
C25 33P
D6 MA26W
C28 10V47
C18 68P
C27 680
R17 470
C6 47n
VM-1
C10 10V47
C11 1n
R15 390
R16 180
J6
C9 47n
C7 10V33
R3 100
T3
R2 100
VC1 4P
C1 2P
D2 1SS
VC2 4P
R4 330
D1 1SS
R5 330
C3 5P
C2 5P
AM-1
J3
C26 50V1
VR1 1K
C5 10V33
C31 1n
R18 27
L3
C8 10V22
R13 22
VR3 100K
L5
C30 1n
C29 33P
L4
VR2 1K
C31 1n
C4 5P
L1
6.52
6.53
1.61
1.61
5.92
5.52
0.74
1.38
2.07
6.53
3.9
1.45
3.9
1.99
4.2
1.73
6.52
4.2
6.53
AUDIO IN
GND
VIDEO IN
GND
RF OUT
GND
RF OUT
A
B
C

CIRCUIT BOARD LAYOUT

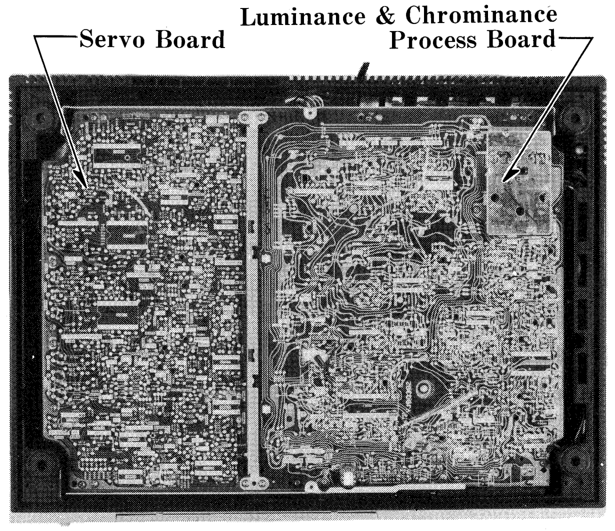
TOP VIEW


Power Supply Board
TV Demodulator Board
Programmable Timer Board

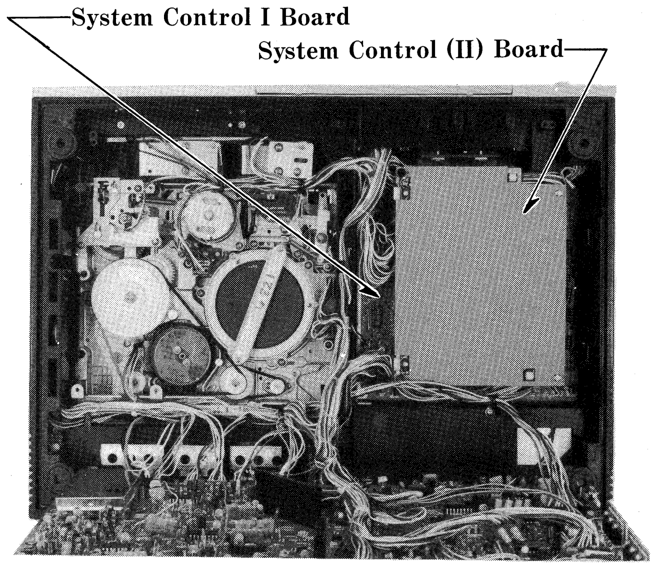
LEFT SIDE VIEW


Audio Board
Still Board

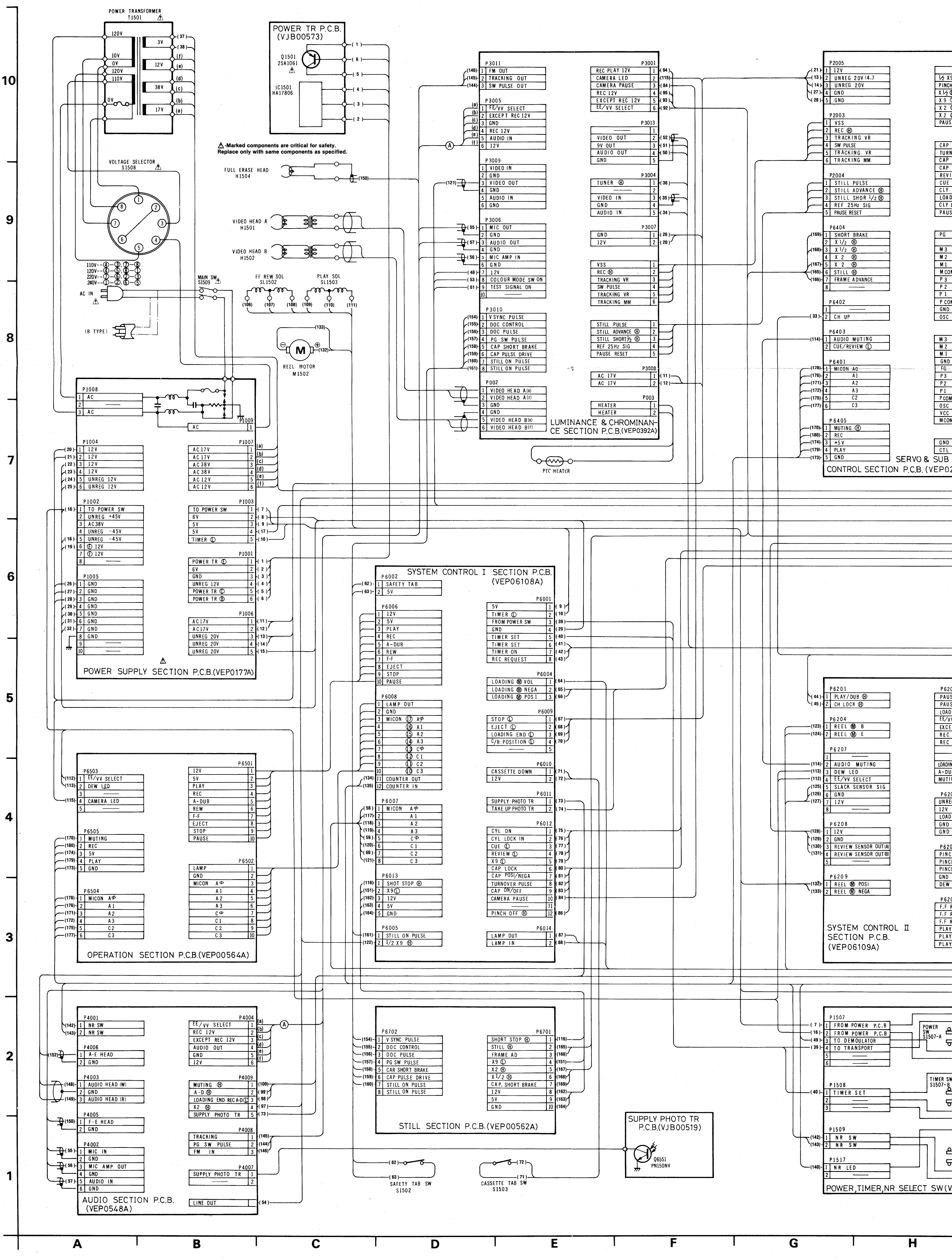
BOTTOM VIEW I


Servo Board
Luminance & Chrominance Process Board

BOTTOM VIEW II


System Control I Board
System Control (II) Board

NV-7000-E/-B INTERCONNECTION SCHEMATIC DIAGRAM


POWER TRANSFORMER T1501 ⚠
POWER TR P.C.B. (VJB00573)
Q1501 2SA1061 ⚠
IC1501 HA17806
⚠-Marked components are critical for safety. Replace only with same components as specified.
VOLTAGE SELECTOR S1508 ⚠
FULL ERASE HEAD H1504
VIDEO HEAD A H1501
VIDEO HEAD B H1502
FF REW SOL SL1502
PLAY SOL SL1503
MAIN SW S1509 ⚠
AC IN ⚠
(B TYPE)
REEL MOTOR M1502
POWER SUPPLY SECTION P.C.B.(VEP0177A)
LUMINANCE & CHROMINANCE SECTION P.C.B.(VEP0392A)
PTC HEATER
SERVO & SUB CONTROL SECTION P.C.B. (VEP02
SYSTEM CONTROL I SECTION P.C.B. (VEP06108A)
SYSTEM CONTROL II SECTION P.C.B. (VEP06109A)
OPERATION SECTION P.C.B.(VEP00564A)
AUDIO SECTION P.C.B. (VEP0548A)
STILL SECTION P.C.B.(VEP00562A)
SUPPLY PHOTO TR P.C.B.(VJB00519)
Q6551 PN150NV
SAFETY TAB SW S1502
CASSETTE TAB SW S1503
POWER,TIMER,NR SELECT SW(V
POWER SW S1507-A
TIMER SW S1507-B
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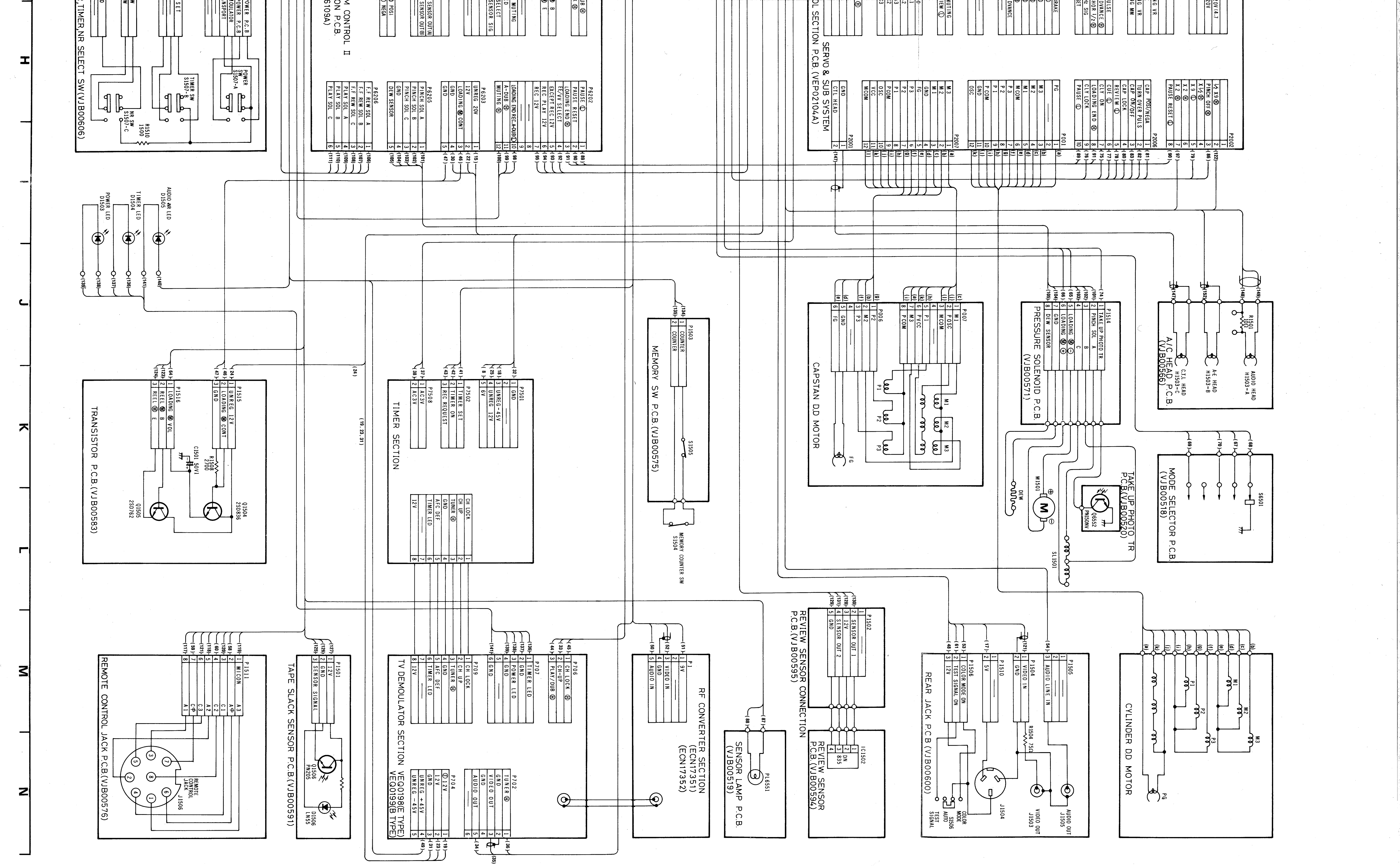
H
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K
L
M
N
TIMER, NR SELECT SW (VJB00606)
SERVO & SUB SYSTEM CONTROL SECTION P.C.B. (VEP02104A)
POWER LED D1503
TIMER LED D1504
AUDIO 4M LED D1505
TRANSISTOR P.C.B.(VJB00583)
TIMER SECTION
MEMORY SW P.C.B.(VJB00575)
MEMORY COUNTER SW S1504
CAPSTAN DD MOTOR
PRESSURE SOLENOID P.C.B. (VJB00571)
TAKE UP PHOTO TR P.C.B.(VJB00520)
A/C HEAD P.C.B. (VJB00566)
AUDIO HEAD H1503-A
A/E HEAD H1503-B
CTL HEAD H1503-C
MODE SELECTOR P.C.B. (VJB00518)
REMOTE CONTROL JACK P.C.B.(VJB00576)
TAPE SLACK SENSOR P.C.B.(VJB00591)
TV DEMODULATOR SECTION VEQ0198(E TYPE) VEQ0199(B TYPE)
RF CONVERTER SECTION (ECN17351) (ECN17352)
SENSOR LAMP P.C.B. (VJB00519)
REVIEW SENSOR CONNECTION P.C.B.(VJB00595)
REVIEW SENSOR P.C.B.(VJB00594)
REAR JACK P.C.B (VJB00600)
CYLINDER DD MOTOR

ORDER NO. VRD-8005-393

Service Manual

Video Cassette Recorder

Vol. 4

Panasonic VHS

NV-7000-E -B

Exploded View
Replacement Parts List

SPECIFICATIONS

Power Source:	NV-7000-E, -B, 110, 120, 220, 240V AC 50/60Hz
Power Consumption:	Approx. 52 watts
Television System:	CCIR: 625 lines, 50 fields PAL colour signal
Video Recording System:	2 rotary heads, helical scanning system Luminance: FM azimuth recording Colour signal: converted subcarrier phase shift recording
Audio Track:	1 track
Tape Format:	Tape width 12.7mm high density tape
Tape Speed:	23.39mm/s
Record/Playback Time:	180 min. with NV-E180
FF/REW Time:	Less than 4.5 min. with NV-E180
Heads:	Video: 2 rotary heads Audio/Control: 1 stationary head Erase: 1 full track erase
Input Level:	Video: VIDEO IN connector (BNC) 1.0Vp-p, 75Ω unbalanced Audio: MIC IN jack −70dB, 600Ω unbalanced LINE IN jack −20dB, 100kΩ unbalanced
Output Level:	Video: VIDEO OUT connector (BNC) 1.0Vp-p, 75Ω unbalanced Audio: LINE OUT jack −6dB, 600Ω unbalanced RF Modulated: UHF channel 36 (± 4) 75Ω unbalanced
Weight:	12.7kg
Dimensions:	480(W) × 136(H) × 356(D) mm
Accessories Supplied:	1 pc. Video cassette tape, NV-E120 1 pc. DIN-DIN coaxial cable, VJA0130 1 pc. Dust cover, VFB0008 1 pc. Remote control unit, VSQ0117, Approx. 5m
Optional Accessories:	Video cassette tape: NV-E180 Approx. 258m, 180 min. NV-E120 Approx. 174m, 120 min. NV-E60 Approx. 88m, 60 min. Video camera, WV-3300E Wireless remote controller, NV-A700 Microphone

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

CONTENTS

SPECIFICATIONS .... Cover

INNER PARTS LOCATION 4-1

EXPLODED VIEW 4-3

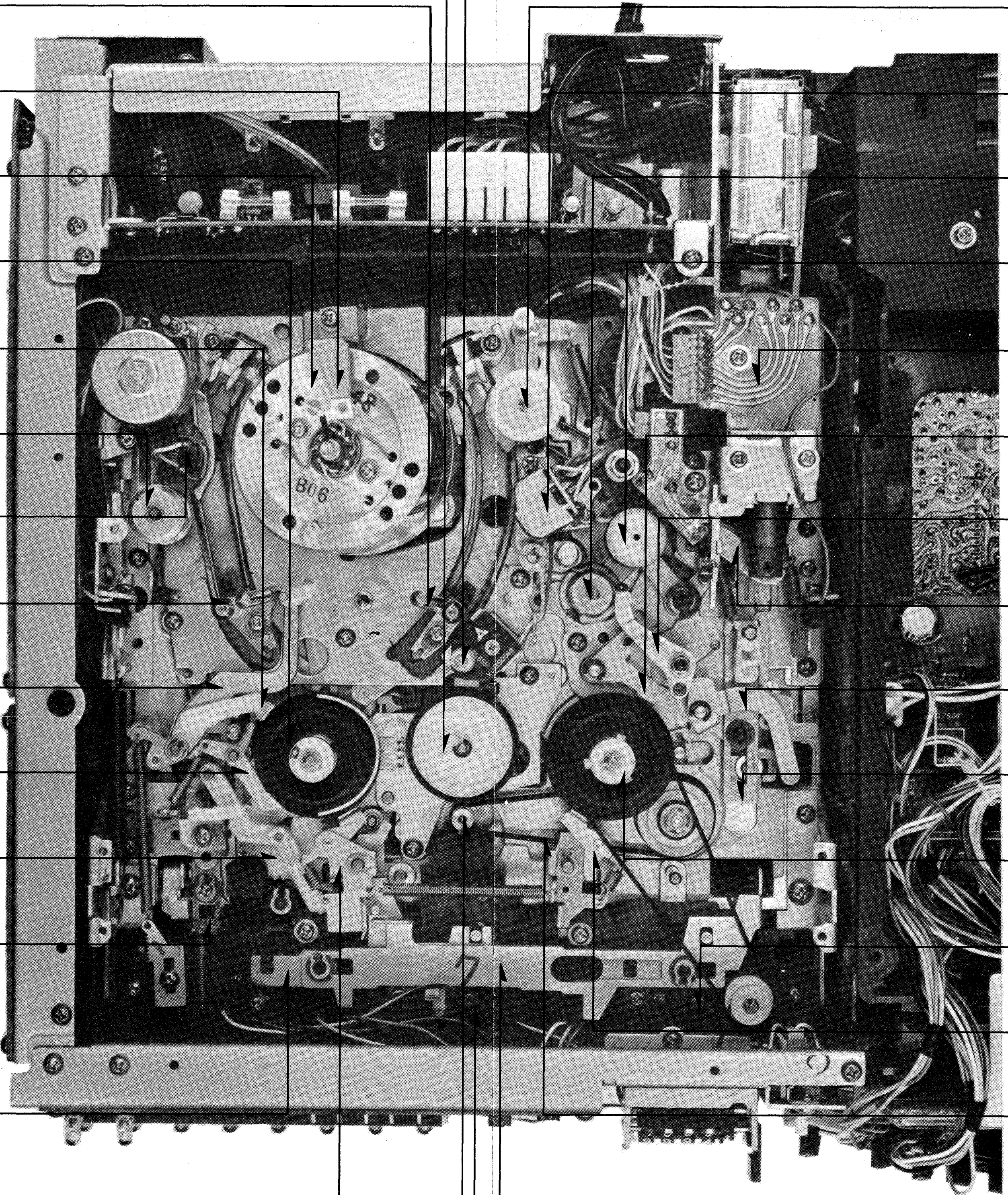
1. Transport Section 4-3
2. Moving Mechanism Section-(1) 4-4
3. Chassis Parts Section 4-5
4. Moving Mechanism Section-(2) 4-6
5. Chassis Frame Section 4-7
6. Timer & Tuner Section 4-8
7. Casing Parts Section 4-9
8. Packing Parts Section 4-10

REPLACEMENT PARTS LIST 4-11

Mechanical Replacement Parts List 4-11

Electrical Replacement Parts List 4-14

INNER PARTS LOCATION
TOP VIEW



Idler Unit VXP0344

Loading Arm (R) Unit VXL0754

Erase Angle Unit VXA0869

Play Solenoid VSJ0046

Supply Reel Table Unit VXR0103

Loading Brake Arm Unit VXZ0082

Supply Limiter Roller VXP0323

Erase Head VBS0014

Loading Arm (L) Unit VXL0753

Tension Arm Unit VXL0786

F.F Soft Brake Unit VXZ0077

Winding Gear Arm Unit ~~VXL0780~~

Tension Release Lever VML1082

Tension Release Lever VXL0778

F.F Slide Lever Unit VXL0794 ✓

Brake Lever (L) Unit VXL0788

Reel Motor Unit VEM0127

Sensor Lamp Angle VMA4097

Inertia Roller Unit VXP0324

A/C Head Unit VEH0122

D.D Capstan VEM0125

Pressure Roller Arm Unit VXL0776

Pinch Solenoid VSJ0044

Soft Brake (T) Unit VXZ0083

Drawer Arm Unit VXL0771

Pressure Lever VML1074

Action Lever Unit VXL0777

Action Slide Lever Unit 1118

Takeup Reel Table Unit VXR0102

Solenoid Lever (B) Unit VXL0798

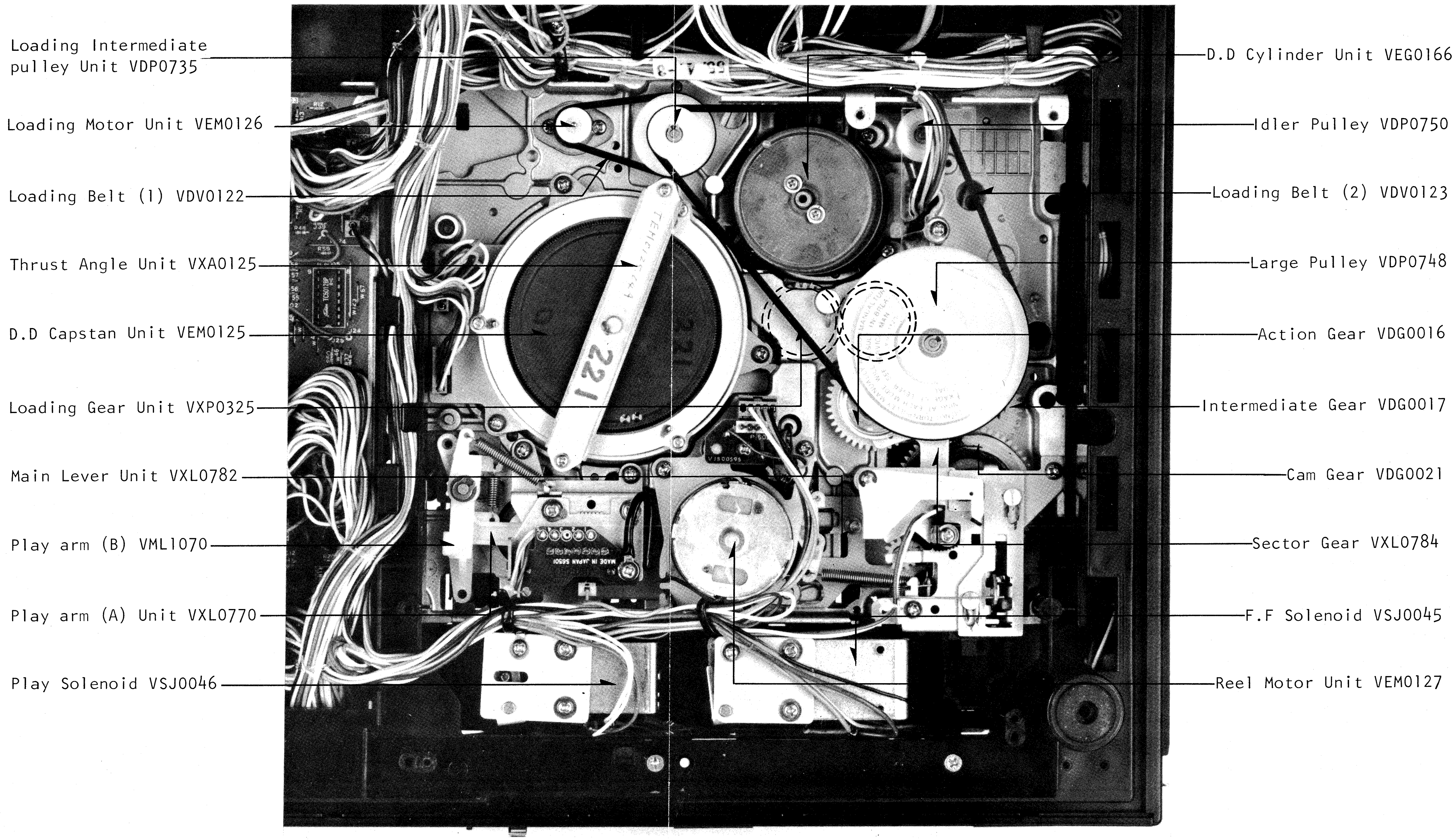
Brake Lever (R) Unit VXL0789

Loading Belt (1) VDV0122

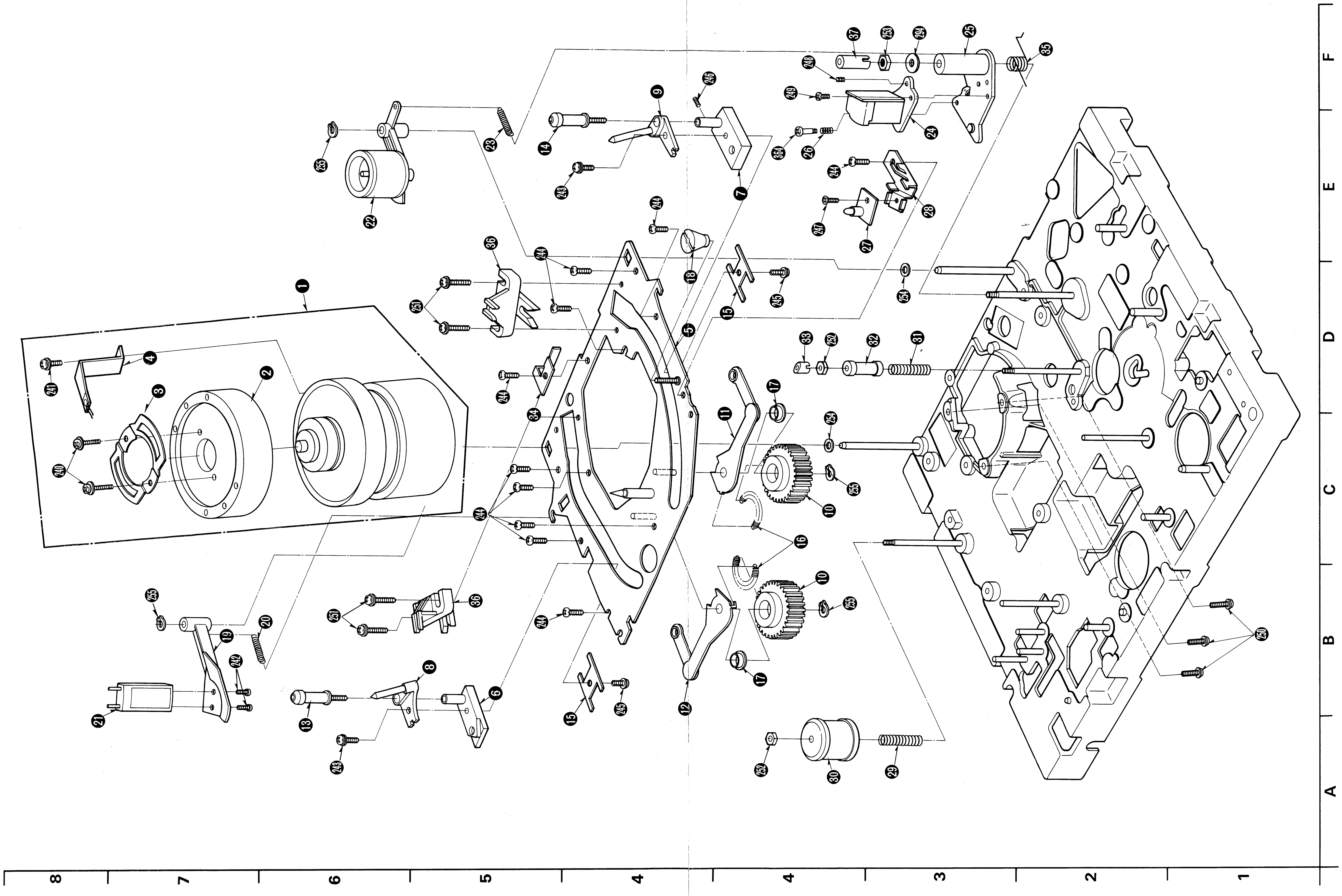
F.F Lever (A) VML1072

Solenoid Lever Unit VXL0792

BOTTOM VIEW


Loading Intermediate pulley Unit VDP0735
Loading Motor Unit VEM0126
Loading Belt (1) VDV0122
Thrust Angle Unit VXA0125
D.D Capstan Unit VEM0125
Loading Gear Unit VXP0325
Main Lever Unit VXL0782
Play arm (B) VML1070
Play arm (A) Unit VXL0770
Play Solenoid VSJ0046
D.D Cylinder Unit VEG0166
Idler Pulley VDP0750
Loading Belt (2) VDV0123
Large Pulley VDP0748
Action Gear VDG0016
Intermediate Gear VDG0017
Cam Gear VDG0021
Sector Gear VXL0784
F.F Solenoid VSJ0045
Reel Motor Unit VEM0127

EXPLODED VIEW ❶ *Transport Section*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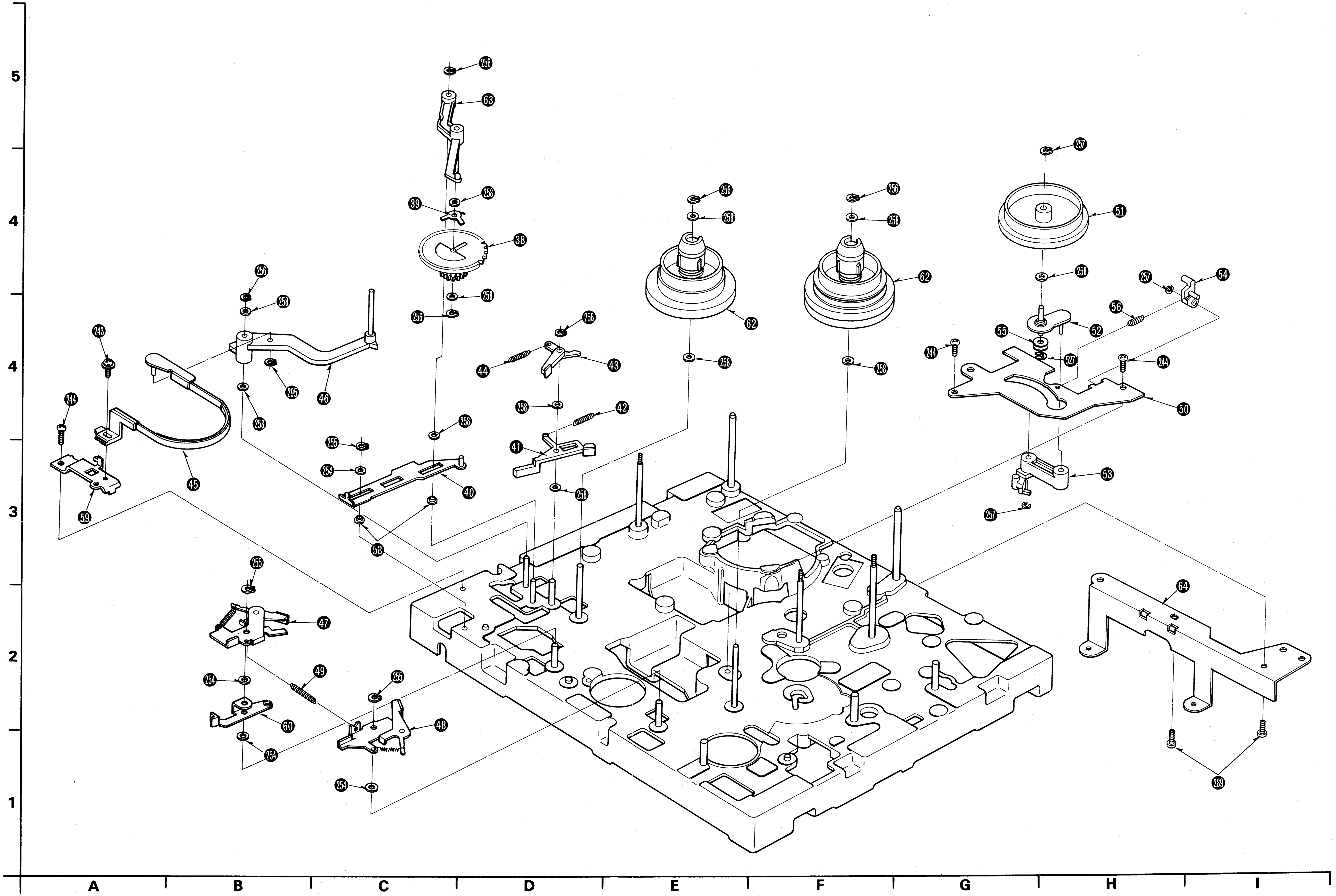
❷ *Moving Mechanism Section-(1)*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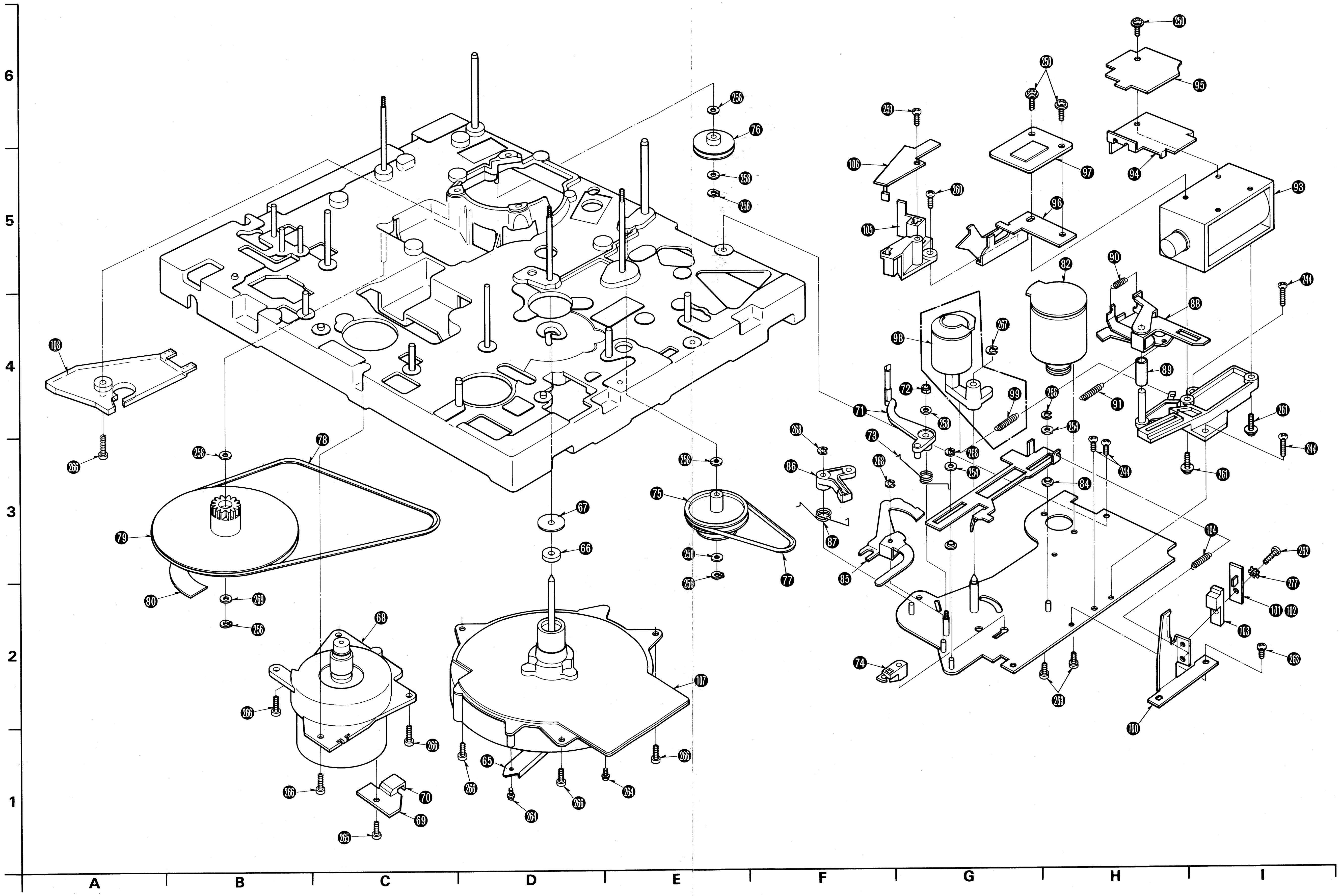
❸ *Chassis Parts Section*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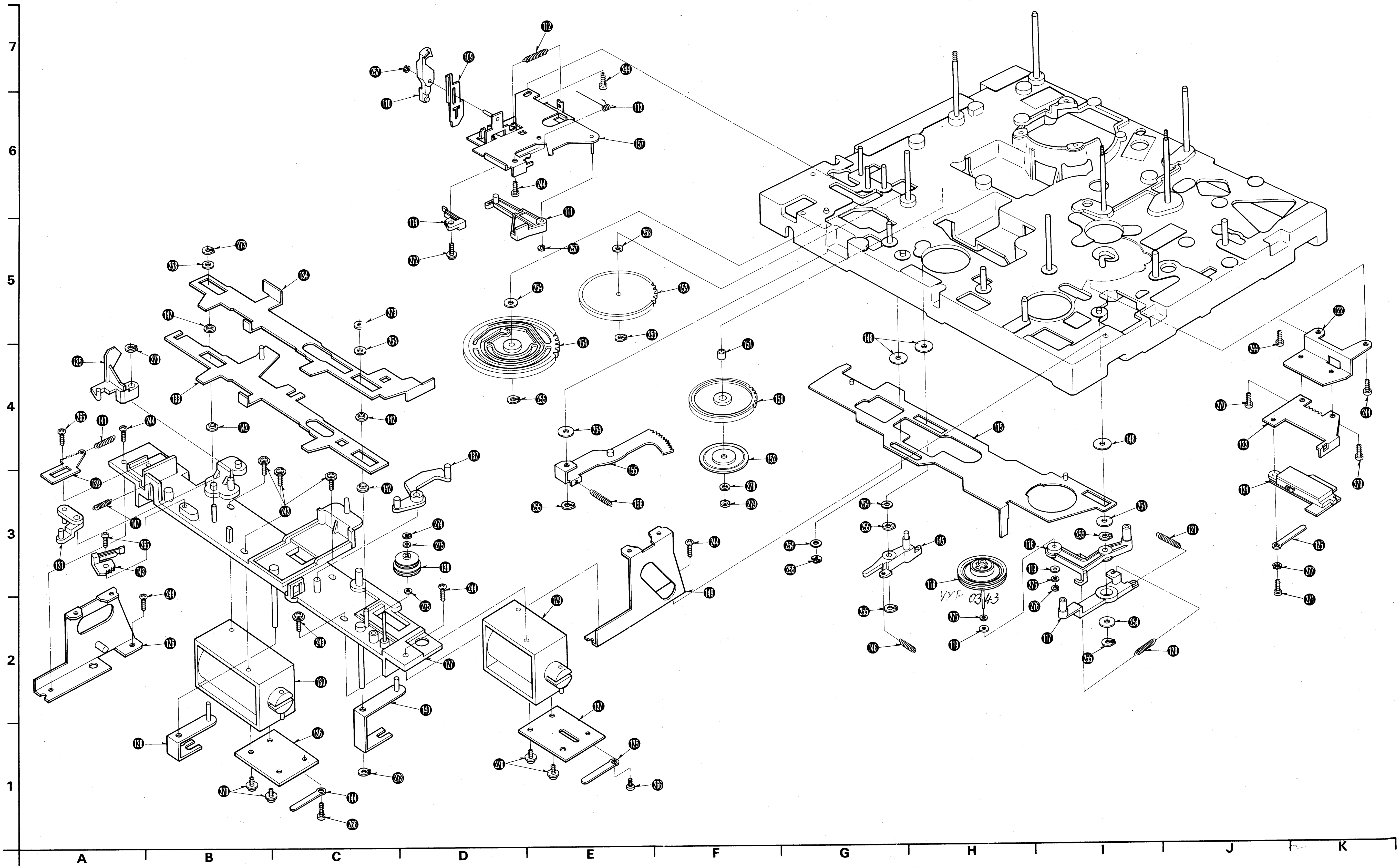
❹ *Moving Mechanism Section-(2)*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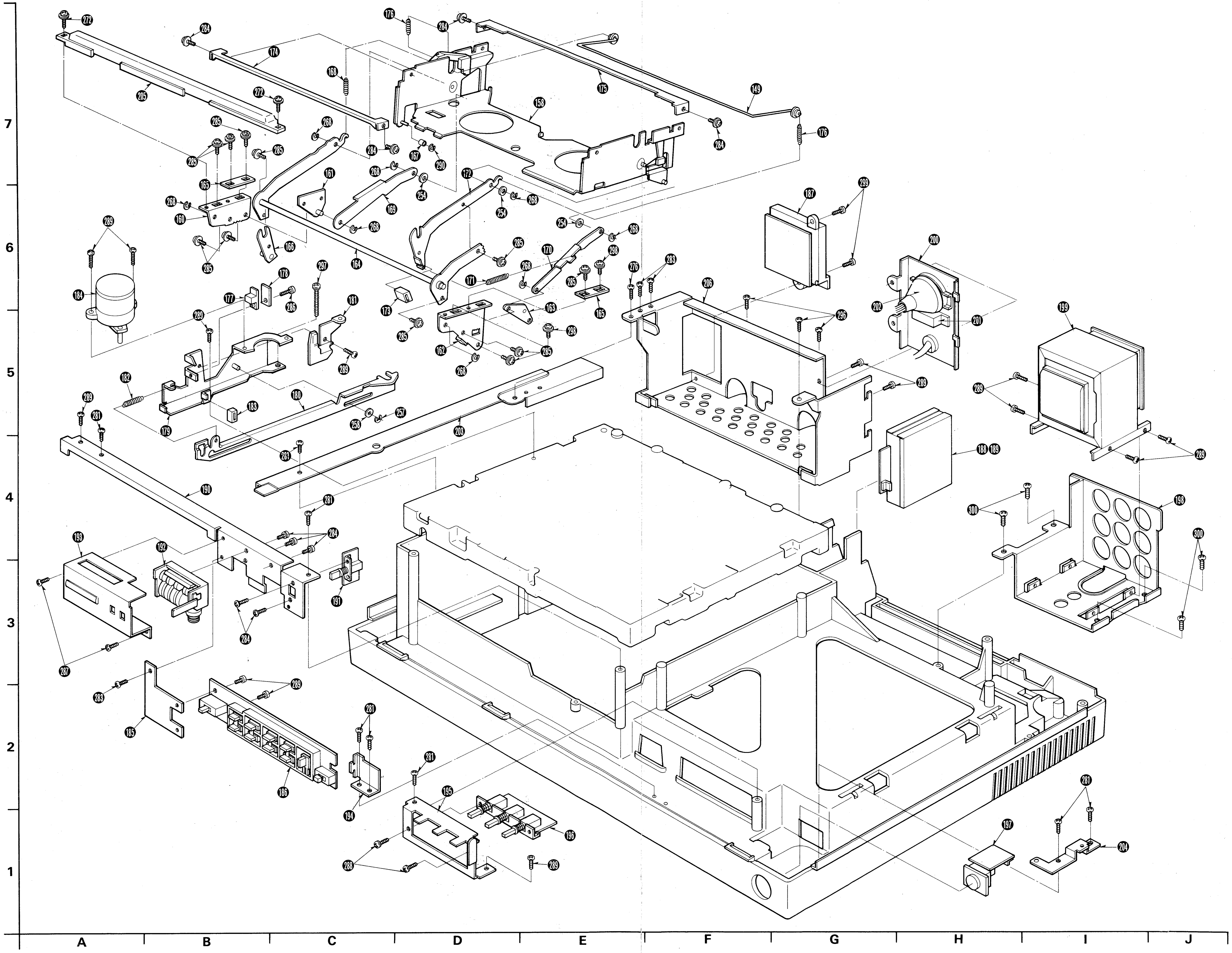
VYF 0343

❺ Chassis Frame Section



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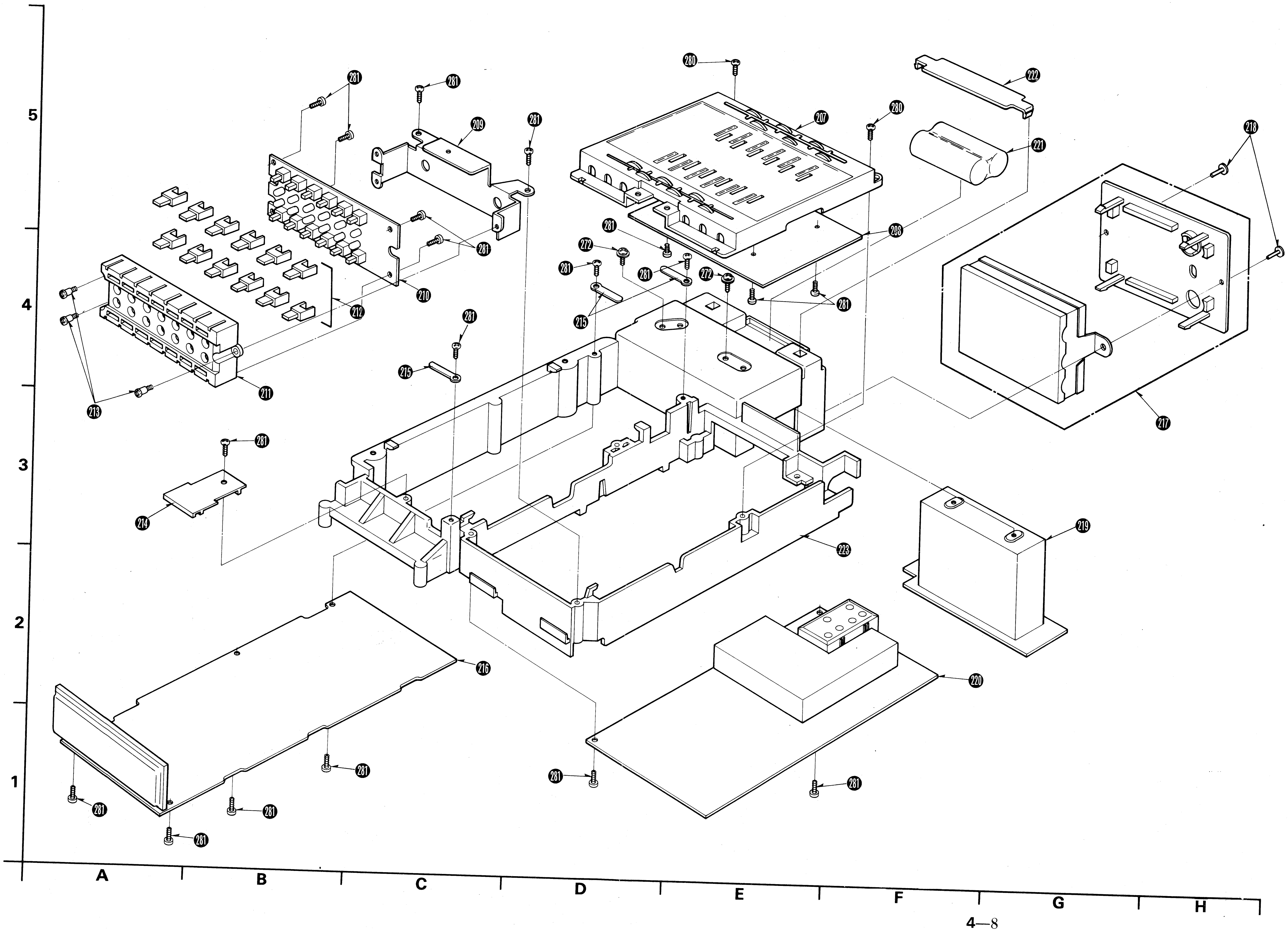
❻ *Timer & Tuner Parts Section*



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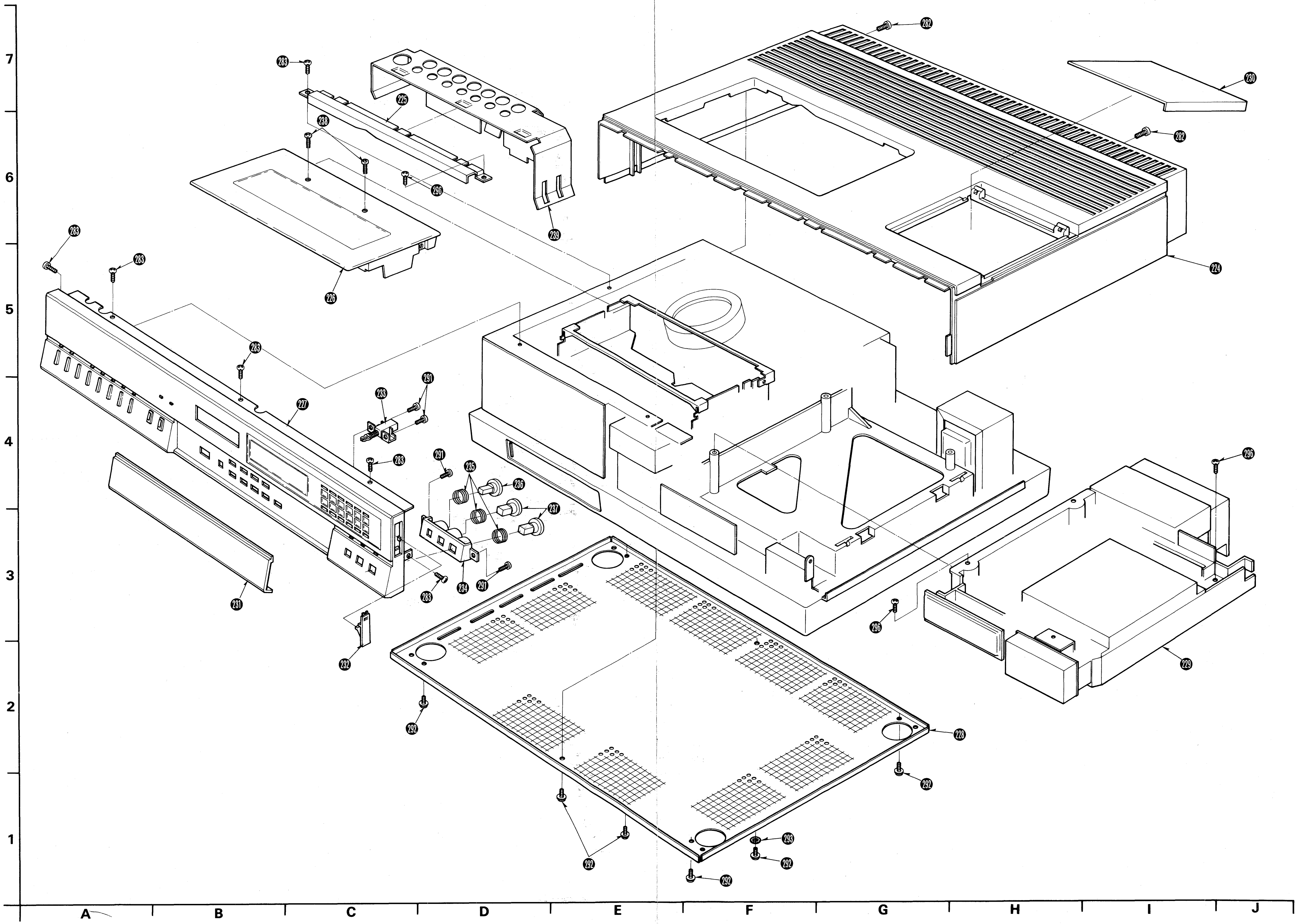
❼ *Casing Parts Section*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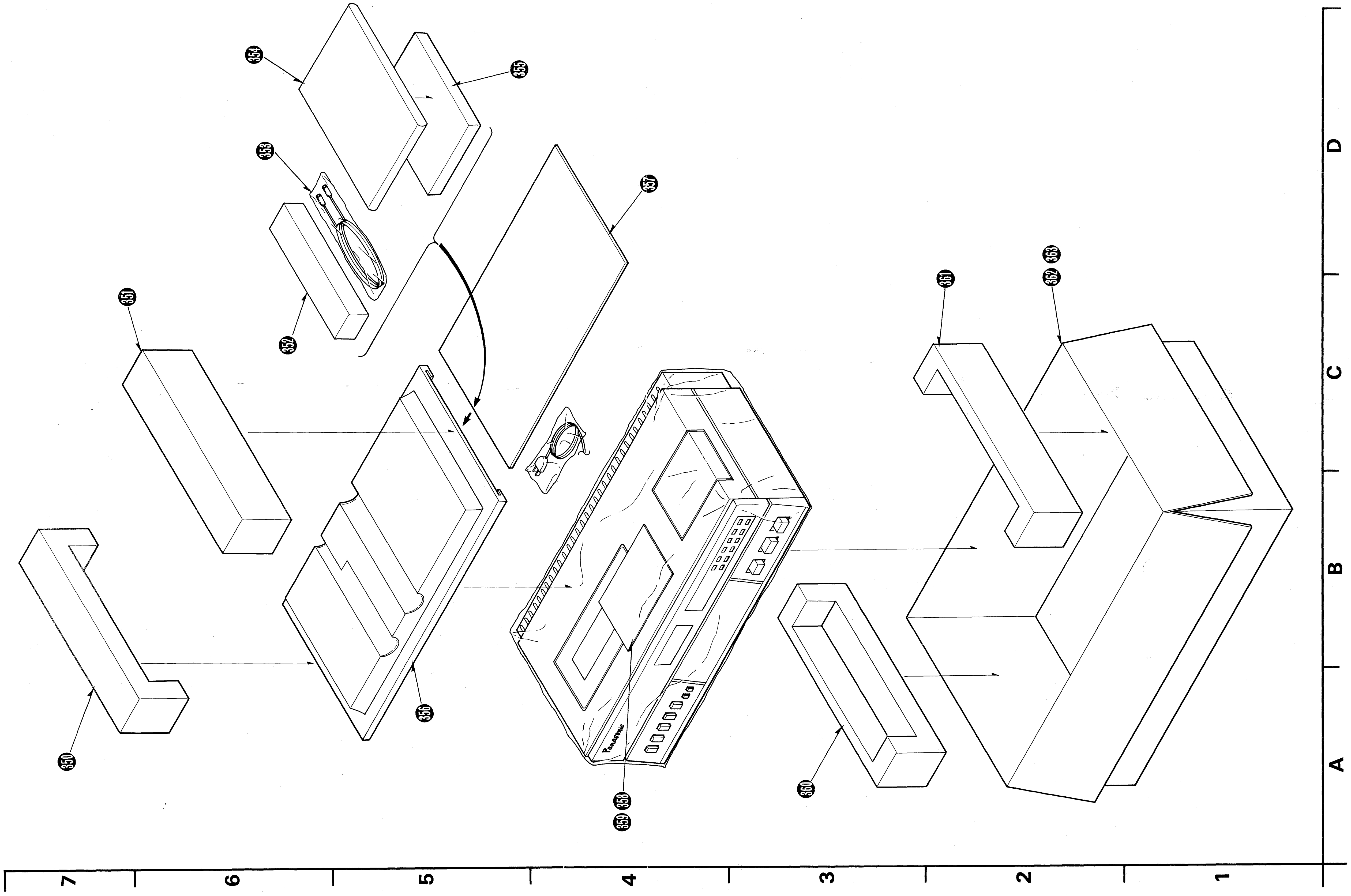
296

❽ *Packing Parts Section*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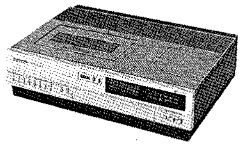
MECHANICAL REPLACEMENT PARTS LIST

Model No. NV-7000E/B

Notes:

1. * Be sure to make your orders of replacement parts according to this list.
   * "Ⓝ" in Remarks column indicates new parts.
2. The column of Ref. No. indicates the number of exploded view and the located position of the part. Refer to exploded views of No. 1—7 and see the cross section of the horizontal column (1—up) and the vertical column (A—up).



Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
1(1)		VEG0166	D.D Cylinder Unit	1	
2(1)		VEH0121	Upper Cylinder Unit	1	
3(1)		VMA3165	Wire Cover	1	
4(1)		VXA0869	Erase Angle Unit	1	
5(1)		VXA1188	Loading Base Unit	1	
6(1)		VXA1189	Shaft Holder (S) Unit	1	
7(1)		VXA1190	Shaft Holder (T) Unit	1	
8(1)		VXA1191	Inclined Base (S) Unit	1	
9(1)		VXA1084	Inclined Base (B) Unit	1	
10(1)		VXP0325	Loading Gear Unit	2	
11(1)		VXL0754	Loading Arm (R) Unit	1	
12(1)		VXL0753	Loading Arm (L) Unit	1	
13(1)		VXP0302A	Roller Post Unit	1	
14(1)		VXP0302C	Roller Post Unit	1	
15(1)		VMA3997	Shaft Holder Stopper	2	
16(1)		VMB0669	Loading Spring	2	
17(1)		VMX0257	Arm Sleeve	2	
18(1)		VHN0014	"X" Adjust Nut	1	
19(1)		VML1032	E.H Lever	1	
20(1)		VMB0665	E.H Lever Spring	1	
21(1)		VBS0014	Erase Head	1	
22(1)		VXP0324	Inertia Roller Unit	1	
23(1)		VMB0667	Inertia Roller Arm Spring	1	
24(1)		VEH0122	A/C Head Unit	1	
25(1)		VXA1184	Head Base (B) Unit	1	
26(1)		VMB0404	Adjust Spring	1	
27(1)		XAMV0019	Sensor Lamp	1	
28(1)		VMA4097	Sensor Lamp Angle	1	
29(1)		VMB0688	Supply Limiter Spring	1	
30(1)		VXP0323	Supply Limiter Roller	1	
31(1)		VMB0699	P4 Spring	1	
32(1)		VMX0267	Post Sleeve (B)	1	
33(1)		VMX0271	P4 Cap	1	
34(1)		VMA4122	Lead Wire Angle	1	
35(1)		VMB0668	A/C Spring	1	
36(1)		VMD0100	Post Stopper	2	
37(1)		VMX0256	Stopper	1	
240(1)		XYN3+B10BNS	Screw	2	
241(1)		XYN3+C6	Screw	1	
242(1)		XYN2+C4S	Screw	2	
243(1)		XYN3+F8S	Screw	6	
244(1)		XTV3+8FS	Screw	35	
245(1)		XTN3+C4S	Screw	2	
246(1)		XXE2D2FP	Setscrew	2	
247(1)		XSS26+6S	Screw	1	
248(1)		XXE3A6	Setscrew	1	
249(1)		XSN3D8S	Screw	1	
250(1)		XYN3+C8S	Screw	7	
251(1)		XYN3+F10S	Screw	4	
252(1)		XNG3B	Nut	2	
253(1)		XNG4	Nut	1	
254(1)		XWXV4D9	Polyslider Washer	35	
255(1)		XUEV4FP	Retaining Ring	12	
294(1)		XWG4FX	Washer	1	
38(2)		VDG0015	Winding Gear	1	
39(2)		VMA3999	Thrust Spring	1	
40(2)		VXL0778	Tension Release Lever Unit	1	
41(2)		VXZ0082	Loading Brake Arm Unit	1	
42(2)		VMB0726	Loading Brake Spring	1	
43(2)		VXZ0077	F.F Soft Brake Unit	1	
44(2)		VMB0727	F.F Soft Brake Spring (A)	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
45(2)		VXL0787	Tension Arm Board Unit	1	
46(2)		VXL0786	Tension Arm Unit	1	
47(2)		VXL0788	Brake Lever (L) Unit	1	
48(2)		VXL0789	Brake Lever (R) Unit	1	
49(2)		VMB0729	Brake Arm Spring	1	
50(2)		VXA1228	Idler Base Unit	1	
51(2)		VXP0344	Idler Unit	1	
52(2)		VXL0772	Idler Arm Unit	1	
53(2)		VXL1107	Idler Lever (A)	1	
54(2)		VML1068	Flection Lever	1	
55(2)		VDP0770	Guide Roller	1	
56(2)		VMB0714	Flection Lever Spring	1	
57(2)		VMX0122	Slide Washer	1	
58(2)		VMX0274	Slide Washer (B)	1	
59(2)		VMA4189	Tension Band Base	1	
60(2)		VML1072	F.F Lever (A)	1	
61(2)		VXR0103	Supply Reel Table Unit	1	
62(2)		VXR0102	Takeup Reel Table Unit	1	
63(2)		VXL0780	Winding Gear Arm Unit	1	
64(2)		XMA4185	Chassis Bracket	1	
243(2)		XYN3+F8S	Screw	6	
244(2)		XTV3+8FS	Screw	35	
254(2)		XWXV4D9	Polyslider Washer	33	
255(2)		XUEV4FP	Retaining Washer	12	
256(2)		XUEV3FP	Retaining Washer	9	
257(2)		XUC25FP	Retaining Washer	6	
258(2)		XWXV3D	Polyslider Washer	49	
289(2)		XTV3+8F	Screw	14	
295(2)		XUEV3FX	Retaining Washer	1	
65(3)		VXA0125	Thrust Angle Unit	1	
66(3)		VMD0104	Oil Pool	1	
67(3)		VMX0251	Oil Seal	1	
68(3)		VEM0127	Reel Motor Unit	1	
69(3)		VJB00595	Review Sensor P.C. Board	1	
70(3)		VJP1108	5 Pin Header	1	
71(3)		VXL0771	Drawer Arm Unit	1	
72(3)		VHD0045	Nylon Nut	1	
73(3)		VMB0723	Drawer Arm Spring	1	
74(3)		VMD0113	Cassette Support	1	
75(3)		VDP0735	Loading Intermediate Pulley Unit	1	
76(3)		VDP0750	Idler Pulley	1	
77(3)		VDV0122	Loading Belt (1)	1	
78(3)		VDV0123	Loading Belt (2)	1	
79(3)		VDP0748	Large Pulley	1	
80(3)		VQL1120	Loading Caution Lavel	1	
81(3)		VXK0396	Unit Base Unit	1	
82(3)		VEM0126	Loading Motor Unit	1	
83(3)		VML1118	Action Slide Lever	1	
84(3)		VMX0122	Slide Washer A	2	
85(3)		VXL0777	Action Lever	1	
86(3)		VXZ0083	Soft Brake (T) Unit	1	
87(3)		VMB0737	Soft Brake Spring (T)	1	
88(3)		VML1074	Pressure Lever	1	
89(3)		VMX0275	Sleeve	1	
90(3)		VMB0719	Pressure Spring	1	
91(3)		VMB0721	Return Spring	1	
92(3)		VXA1234	Opener Unit	1	
93(3)		VSJ0044	Pressure Solenoid	1	
94(3)		VMA4182	P.C. Board Angle	1	
95(3)		VJB00571	Solenoid P.C. Board	1	
96(3)		VXA1234	Opener Unit	1	
97(3)		VEK0854	Dew Sensor Unit	1	
98(3)		VXL0776	Pressure Roller Arm Unit	1	
99(3)		VMB0720	Return Spring (A)	1	
100(3)		VMA4181	Photo Transistor Bracket	1	
101(3)		VJB00520	Takeup Sensor P.C. Board	1	
102(3)		PN150NV	Photo Transistor	1	
103(3)		VMD0091	Transistor Holder (R)	1	
104(3)		VMB0722	Return Spring (C)	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
105(3)		VMD0122	Cue Sensor Bracket	1	
106(3)		VJB00591	Cue Sensor P.C. Board	1	
107(3)		VEM0125	D.D Capstan	1	
108(3)		VGF0021	Belt Cover	1	
244(3)		XTV3+8FS	Screw	35	
250(3)		XYN3+C8S	Screw	7	
254(3)		XWXV4D9	Polyslider Washer	33	
256(3)		XUEV3FP	Retaining Ring	9	
258(3)		XWXV3D	Polyslider Washer	48	
259(3)		XTV3+8J	Screw	1	
260(3)		XYN3+C6S	Screw	1	
261(3)		XYN3+F12S	Screw	2	
262(3)		XSN3+8S	Screw	1	
263(3)		XYN3+C4S	Screw	3	
264(3)		XYN26+C6S	Screw	2	
265(3)		XTV3+10J	Screw	3	
266(3)		XTV3+6FS	Screw	32	
267(3)		XUC5FP	Retaining Ring	1	
268(3)		XUC3FP	Retaining Ring	12	
269(3)		XWXV3A	Polyslider Washer	1	
277(3)		XWC3BF	Washer	1	
109(4)		VML1102	Lock Slide Lever	1	
110(4)		VML1103	Lock Lever	1	
111(4)		VML1104	Eject Lever	1	
112(4)		VMB0731	Eject Spring	1	
113(4)		VMB0673	Stop Plate Spring	1	
114(4)		VSH0013	Leaf Switch	1	
115(4)		VXL0782	Main Lever Unit	1	
116(4)		VXL0770	Play Arm (A) Unit	1	
117(4)		VML1070	Play Arm (B)	1	
118(4)		VXP0343	Play Clutch Unit	1	
119(4)		VMX0272	2-6 Washer	2	
120(4)		VMB0716	Play Idler Spring	1	
121(4)		VMB0715	Play Arm Spring	1	
122(4)		VMA4183	Switch Holder A	1	
123(4)		VMA4184	Switch Holder B	1	
124(4)		VSS0048	Mode Selector Switch	1	
125(4)		VJR3	Clamp	1	
126(4)		VXL0791	Chassis Angle B Unit	1	
127(4)		VXK0397	Solenoid Base Unit	1	
128(4)		VXL0792	Solenoid Lever Unit	1	
129(4)		VSJ0046	Play Solenoid	1	
130(4)		VSJ0045	F.F Solenoid	1	
131(4)		VML1082	Tension Release Lever	1	
132(4)		VML1083	Main Brake Release Lever	1	
133(4)		VXL0794	F.F Slide Lever Unit	1	
134(4)		VML1086	Play Slide Lever	1	
135(4)		VML1087	Safety Lever	1	
136(4)		VMA4186	Solenoid Plate (A)	1	
137(4)		VMA4187	Solenoid Plate (B)	1	
138(4)		VDP0772	Counter Intermediate	1	
			Pulley		
139(4)		VMA4188	Tention Spring Hook	1	
140(4)		VXL0798	Solenoid Lever B Unit	1	
141(4)		VMB0725	Tension Arm Spring	1	
142(4)		VMX0122	Slide Washer A	1	
143(4)		VSH0013	Leaf Switch	1	
145(4)		VXL0795	Idler Lever B Unit	1	
146(4)		VMB0713	Idler Spring	1	
147(4)		VMB0732	Tension Release Spring	1	
148(4)		VMX0279	Slide Washer (D)	3	
149(4)		VMA4192	Chassis Angle A	1	
150(4)		VDG0016	Action Gear	1	
151(4)		VMX0268	Action Gear Sleeve	1	
152(4)		VMA4088	Holder	1	
153(4)		VDG0017	Intermediate Gear	1	
154(4)		VDG0021	Cam Gear	1	
155(4)		VXL0784	Sector Gear	1	
156(4)		VMB0717	Idler Spring	1	
157(4)		VXA1240	Lock Base Unit	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
243(4)		XYN3+F8S	Screw	6	
244(4)		XTV3+8FS	Screw	35	
254(4)		XWXV4DG	Polyslider Washer	31	
255(4)		XUEV4FP	Retaing Ring	12	
256(4)		XUEV3FP	Retaining Ring	9	
257(4)		XUC25FP	Retaining Ring	7	
258(4)		XWXV3D	Polyslider Washer	49	
265(4)		XTV3+10J	Screw	3	
266(4)		XTV3+6FS	Screw	34	
270(4)		XYN3+F6S	Screw	6	
271(4)		XTV3+10FS	Screw	1	
272(4)		XYN3+F8S	Screw	5	
273(4)		XUEV4FX	Retaining Ring	4	
274(4)		XUEV2FX	Retaining Ring	1	
275(4)		XWXV2D	Polyslider Washer	4	
276(4)		XUC15FP	Retaining Ring	1	
277(4)		XWC3BF	Washer	3	
278(4)		XWA3	Washer	1	
279(4)		XNG3C	Nut	1	
158(5)		VMA4198	Cassette Holder Unit	1	
159(5)		VMW0086	Holder Shaft Unit	1	
160(5)		VMA4003	Holder Angle (L)	1	
161(5)		VMA3988	Adjustment Plate (L)	1	
162(5)		VMA4002	Holder Angle (R)	1	
163(5)		VMA3987	Adjustment Plate (R)	1	
164(5)		VMS1672	Main Shaft Unit	1	
165(5)		VMA3990	Holder Adjustment Plate	2	
166(5)		VMA4191	Stopper Angle	1	
167(5)		VMX0247	Lock Collar	1	
168(5)		VMB0734	Lever Spring	1	
169(5)		VML1110	Sub Arm (L)	1	
170(5)		VML1111	Sub Arm (R)	1	
171(5)		VMB0735	Holder Spring (R)	1	
172(5)		VML1098	Main Arm (L)	1	
173(5)		VMG0215	Cushion	1	
174(5)		VMA3985	Front Reimforcement Plate	1	
			(A)		
175(5)		VMA4190	Rear Reinforcement Plate	1	
			(A)		
176(5)		VMB0730	Cassette Support Spring	2	
177(5)		VMD0092	Transistor Holder (L)	1	
178(5)		VJB00521	Supply Sensor P.C. Board	1	
179(5)		VXA1199	Sensor Angle Unit	1	
180(5)		VML1101	Coupling Rod	1	
181(5)		VMA4149	Transistor Holder Guard	1	
182(5)		VMB0674	Holder Spring (L)	1	
183(5)		VMG0206	Stopper Rubber (B)	1	
184(5)		VDG0022	Damper	1	
185(5)		VMA4213	Timer P.C.B. Angle	1	
186(5)		VEP0765A	Timer Operation Section	1	
187(5)		VEK0906	Antenna Terminal Unit	1	
188(5)		ENC-17351	RF Converter	1	For NV-7000E
189(5)		ENC-17352	RF Converter	1	For NV-7000B
190(5)		VMA4209	P.C. Board Set Angle	1	
191(5)		ESB6221	Memory Switch	1	
192(5)		VDC0021	Counter Unit	1	
193(5)		VYF0163	Counter Panel Unit	1	
194(5)		VMA4214	Timer P.C. Board Set	1	
			angle (right)		
195(5)		VMA4216	Power Switch Set Angel	1	
196(5)		VES0117	Power Switch Unit	1	
197(5)		VEK0905	Remote Control Unit	1	
198(5)		VMA4207	Transformer Angle	1	
199(5)		VTP0042	Transformer	1	
200(5)		VMA4221	Power Cord Support Angle	1	
201(5)		ESD-39645	All OFF Switch	1	
202(5)		ESE-3721	Power Select Switch	1	⚠
203(5)		VMA4206	Audio P.C.B. Support	1	
			Angle		
204(5)		VMA4217	Remote Control Jack Angle	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
205(5)		VGQ0153	Cassette Guide	1	
206(5)		VEK0896	Radiating Plate	1	
254(5)		XWXV4D9	Polyslider Washer	35	
257(5)		XUC25FP	Retaining Ring	7	
258(5)		XWXV3D	Polyslider Washer	49	
268(5)		XUC3FP	Retaining Ring	12	
272(5)		XYN3+F8S	Screw	5	
277(5)		XWC3BF	Washer	2	
281(5)		XTV3+10G	Screw	28	
283(5)		XTV3+8FR	Screw	9	
284(5)		XYN3+C6S	Screw	9	
285(5)		XYN3+F6S	Screw	9	
286(5)		XYN3+8S	Screw	1	
287(5)		XTV3+6F	Screw	2	
288(5)		XYN3+C8S	Screw	2	
289(5)		XTV3+8F	Screw	14	
290(5)		XUC15F	Retaining Ring	1	
296(5)		XTV3+14GR	Screw	7	
297(5)		XYN4+C25S	Screw	1	
298(5)		XYN3+F8RS	Screw	4	
299(5)		XTV3+10JK	Screw	2	
300(5)		XTV+15A	Screw	4	
207(6)		VKM0098	Preset VR Case	1	
208(6)		VEP0763A	Preset VR P.C.B. Unit	1	
209(6)		VMA4202	C.H Keyboard Case Set	1	
			Angle		
210(6)		VEP0762A	C.H Keyboard P. C. Board	1	
			Unit		
211(6)		VGQ0161	C.H Keyboard Case	1	
212(6)		VGT0171	Select Knob	12	
213(6)		VHD0046	Screw	3	
214(6)		VGQ0162	Timer Holder	1	
215(6)		VJR3	Clamper	3	
216(6)		VEP0764A	Timer P.C. Board Unit	1	
217(6)		VEJ0197	Antenna Terminal Unit	1	
218(6)		VHN0017	Clamper	2	
219(6)		VEP1099A	I.F Tuner P.C. Board Unit	1	
220(6)		VEP0757A	A P.C. Board Unit	1	
221(6)		MR-AAP2	Battery	1	
222(6)		VGQ0165	Battery Holder	1	
223(6)		VMD0119	Demodulator Frame	1	
272(6)		XTN3+F8S	Screw	5	
280(6)		XTV3+10GR	Screw	2	
281(6)		XTV3+10G	Screw	28	
224(7)		VYP0049	Top Panel Unit	1	
225(7)		VMA4199	Top Panel Reinforcement	1	
			Angle		
226(7)		VGP0362	Cassette Cover	1	
227(7)		VYP0451	Front Panel Unit	1	
228(7)		VKU0156	Bottom Plate	1	
229(7)		VEQ0198D	Demodulator Unit	1	
230(7)		VGP0358	Preset Cover	1	
231(7)		VGP0369	Timer Cover	1	
232(7)		VGQ0159	Film Holder Cover	1	
233(7)		VSQ0124	Door Switch	1	
234(7)		VGQ0160	Power Button Holder	1	
235(7)		VMB0738	Power Button Spring	3	
236(7)		VGT0166	TV/VTR Button	1	
237(7)		VGT0165	Power Button	2	
238(7)		VHD0048	Screw (Cassette Cover)	2	
239(7)		VSC0497	Shield Case	1	
282 (7)		XSB4+10EK	Screw	2	
283 (7)		XTV3+8FR	Screw	6	
291 (7)		XTV3+8G	Screw	4	
292 (7)		XTW3+10TK	Screw	9	
293 (7)		XWC3BFY	Washer	1	
296 (7)		XTV+14GR	Screw	7	
350 (8)		VPN0601	Left Cushion	1	
351 (8)		VPN0600	Right Cushion	1	
352 (8)		VSQ0167	Remote Control Unit	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
353(8)		VJA0130	DIN-DIN Coaxial Cable	1	
354(8)		VFB0008	Dust Cover	1	
355(8)		NV-E120	Blank Tape	1	
356(8)		VPN0594	Accessary Case (A)	1	
357(8)		VPN0595	Accessaru Case (B)	1	
358(8)		VQF0530	Fan Bag E Type	1	
359(8)		VQF0531	Fan Bag B Type	1	
360(8)		VPN0597	Left cushion (Bottom)	1	
361(8)		VPN0596	Right Cushion (bottom)	1	
362(8)		VPG0763	Packing Case (E Type)	1	
363(8)		VPG0764	Packing Case (B Type)	1	
364(1)		VHD0032	Adjust Screw	1	

ELECTRICAL REPLACEMENT PARTS LIST

Model No. NV-7000E/B

Notes:

1. * Be sure to make your orders of replacement parts according to this list.
   * "Ⓝ" in Remarks column indicates new parts.
2. IMPORTANT SAFETY NOTICE
   Components identified by ⚠ have special characteristics important for safety. When replacing any of these components, use only the original ones.
3. Unless otherwise specified,
   All resistors are in OHMS (Ω), 1/8W ± 5% carbon. K=1,000Ω, M=1,000KΩ.
   All capacitors are in MICROFARADS (μF), ±10% P=μμF.

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
		VEP0177A	Power Supply P.C. Board	1	⚠
		VEP02104A	Servo Control & Sub-Transport Control P.C. Board	1	
		VEP0392A	Video & Colour P.C. Board	1	
		VEP06108A	System Control I P.C. Board	1	
		VEP06109A	System Control II P.C. Board	1	
		VEP0458A	Audio P.C. Board	1	
		VEP00562A	Still P.C. Board	1	
		VEP00564A	Operation P.C. Board	1	
		VEP0764A	Timer Indication Section	1	
		VEP0765A	Timer Operation Section	1	
		VEP0757A	Demodulator P.C. Board	1	NV-7000-E
		VEP0757B	Demodulator P.C. Board	1	NV-7000-B
		VEP0758A	Tuner P.C. Board	1	NV-7000-E
		VEP0758B	Tuner P.C. Board	1	NV-7000-B
		VEP0762A	Selector P.C. Board	1	
		VEP0763A	Selector Switch P.C. Board	1	NV-7000-E
		VEP0763B	Selector Switch P.C. Board	1	NV-7000-B
		VJB00518	Mode Selector P.C. Board	1	
		VJB00519	Lamp Intermediate P.C. Board	1	
		VJB00520	Take Up Photo TR Intermediate P.C. Board	1	
		VJB00521	Supply Photo TR Intermediate P.C. Board	1	
		VJB00566	Audio/Control Head P.C. Board	1	
		VJB00571	Pressure Solenoid/Intermediate P.C. Board	1	
		VJB00573	Power Transistor P.C. Board	1	
		VJB00575	Memory Counter P.C. Board	1	
		VJB00576	Remote Control Intermediate P.C. Board	1	
		VJB00583	Transistor Intermediate P.C. Board	1	
		VJB00591	Tape Slack Sensor P.C. Board	1	
		VJB00594	Review Sensor Mounting P.C. Board	1	
		VJB00595	Review Sensor Intermediate P.C. Board	1	
		VJB00600	Output Terminal P.C. Board	1	
		VJB00606	Selector Switch P.C. Board	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			Switches		
S1505		ESB6286	Memory Switch	1	
S1506		ESD14130	Test Signal Switch	1	
S1507		ESB76312		1	
			Connectors		
P1501		VJP1149	3P	1	
P1502		VJP1143	5P	1	
P1503		VJP1148	2P	1	
P1504		VJP1151	6P	1	
P1505,1506		VJP1149	3P	2	
P1507		VJP1143	5P	1	
P1508		VJP1142	3P	1	
P1509		VJP1141	2P	1	
P1511		VJP1145	8P	1	
J1503		VJS1034	BNC Connector	1	
J1506		VJH0111	8P Remote Control Socket	1	
			Resistors		
R1504		ERD25TJ750	1/4W 75	1	
R1509		ERD25TJ561	1/4W 560	1	
PL6551		XAMV0019	Lamp	1	
			Transistors		
Q6551,6552		PN150NV	Photor Transistor	2	
			Diodes		
D1503,1504		LN81RCPHL	L.E.D	2	
D1506		LN55	L.E.D	1	
			Miscellaneous		
		DN838	Hall IC	1	
		PN205	Photo Transistor	1	
		VJH0114	Output Jack	1	
		VJP1152	8P Connector	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			POWER SUPPLY		
			PRINTED CIRCUIT BOARD		
			Diodes		
D1001-1004		30DIFAS		4	⚠
D1006		10DCIN		1	
D1007		10E1LF		1	
D1008		MA150		1	
D1009		10DCIR		1	
D1010		10DCIN		1	
D1011		MA150		1	
D1012		RD62EB		1	
D1013,1014		10E2LF		2	
D1015		RD13EB		1	
			Transistors		
Q1001		2SC1318		1	
Q1002		2SC1684		1	
Q1003		2SC1847V		1	
			Fuses		
F1001		XBA2C10TR0		1	⚠
F1002		XBA2C40TR0		1	⚠
F1003		XBA2C10TR0		1	⚠
F1004		XBA2C05TR0		1	⚠
			Resistors		
R1001		ERC12ZGK275D	1/2W 2.7M	1	⚠
R1003		ERD25TJ392	1/4W 3.9K	1	
R1004		ERD25TJ122	1/4W 1.2K	1	
R1005		ERD25TJ102	1/4W 1K	1	
R1006		ERD25TJ122	1/4W 1.2K	1	
R1007		EVN50A00B52	Variable 500	1	
R1008		ERD25TJ152	1/4W 1.5K	1	
R1010		ERD25TJ222	1/4W 2.2K	1	
			Capacitors		
C1001		ECKDHS472MD	Ceramic 0.0047	1	⚠
C1002		ECET35R472SW	Electrolytic 35V 4700	1	
C1003-1006		ECKW1H103PF	Ceramic 50V 0.01	4	
C1007		ECET35R472SW	Electrolytic 35V 4700	1	
C1009		ECKW1H103PF	Ceramic 50V 0.01	1	
C1011		ECKW1H103PF	Ceramic 50V 0.01	1	
C1012		ECEA1CS470	Electrolytic 16V 47	1	
C1013		ECET16R472SW	Electrolytic 16V 4700	1	
C1014-1017		ECKW1H103PF	Ceramic 50V 0.01	4	
C1018		ECEA1ES470	Electrolytic 25V 47	1	
C1019		ECKW1H681KB	Ceramic 50V 680P	1	
C1020		ECEA1CS101	Electrolytic 16V 100	1	
C1021		ECET63R102SW	Electrolytic 63V 1000	1	
C1022		ECET63R471SW	Electrolytic 63V 470	1	
C1023,1024		ECKW1H103PF	Ceramic 50V 0.01	2	
C1025-1027		ECEA1CS101	Electrolytic 16V 100	3	
C1028		ECQE2A473MCS	Myler 0.047	1	
FL1001		VTQ0006	Line Filter	1	⚠
TR1501		2SA1061	Power Transistor	1	⚠
IC1501		HA17806	IC	1	
R1501		ERF10BM4R7	Resistor 10W 4.7	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			Connectors		
P1001		VJP1144	6P	1	
P1002		VJP1145	8P	1	
P1004		VJP1144	6P	1	
P1005		VJP1146	10P	1	
P1006,1007		VJP1143	5P	2	
			Miscellaneous		
		ESE37212	Voltage Selector Switch	1	⚠
		ESD3964S	All Off Switch	1	⚠
		TEL312	GT Pin	10	
		VJA0111	Power Cord	1	NV-7000-E ⚠
		VJA0112	Power Cord	1	NV-7000-B ⚠
		VJF0017	Cord Bushign	1	⚠
		VJH24	Test Pin	2	
		VJS0039	Fuse Holder	8	⚠
		VMA4218	Heat Sink	1	
		VMA4221	Angle for Power Cord	1	
		VMB0739	Spring for Power Transistor	1	
		VMB0740	Spring for Reg. IC	1	
		XTV3+6BFN	Screw		
			VIDEO COLOUR		
			PRINTED CIRCUIT BOARD		
			(Video Section)		
			Integrated Circuits		
IC3001		AN6310	Video Rec	1	
IC3002		AN6320N	Head Amp	1	
IC3003		SN76670N	Double Limitter	1	
IC3004		AN6332	Video Playback	1	
IC3005		µPD4069C	Inverter	1	
			Transistors		
Q3001		2SD636		1	
Q3002		2SC2206		1	
Q3003		2SB641		1	
Q3004		2SC2206		1	
Q3005		2SC2377		1	
Q3006		2SC2206		1	
Q3007		2SB641		1	
Q3008,3009		2SC638		2	
Q3010		2SD638		1	
Q3011		2SB641		1	
Q3013,3014		2SC2206		2	
Q3015		2SB641		1	
Q3016		2SD636		1	
Q3017,3018		2SC2206		2	
Q3019		2SD636		1	
Q3020		2SB641		1	
Q3021		2SC2206		1	
Q3022		2SB641		1	
Q3023-3026		2SC2206		4	
Q3027		2SB641		1	
Q3028		2SC2206		1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
Q3029		2SD636		1	
Q3030,3031		2SC2206		2	
Q3032		2SC2377		1	
			Diodes		
D3001		MA165		1	
D3002,3003		1SS16		2	
D3004,3005		MA165		2	
D3006		MA165		1	
			Resistors		
R3001		ERD10TJ750	75	1	
R3002-3004		ERD10TJ102	1K	3	
R3305		ERD10TJ103	10K	1	
R3006		EVNK6AA00B53	Variable 5K	1	
R3007		ERD25TJ684	680K	1	
R3008,3009		ERD10TJ332	3.3K	2	
R3010		ERD10TJ271	270	1	
R3011		ERD10TJ222	2.2K	1	
R3012		ERD10TJ223	22K	1	
R3013		EVNK6AA00B53	Variable 5K	1	
R3014		ERD10TJ123	12K	1	
R3015,3016		ERD10TJ332	3.3K	2	
R3017		EVNK6AA00B53	Variable 5K	1	
R3018		ERD10TJ103	10K	1	
R3019		EVNK6AA00B53	Variable 5K	1	
R3020		ERD10TJ102	1K	1	
R3021		ERD10TJ272	2.7K	1	
R3022		ERD10TJ332	3.3K	1	
R3023		ERD10TJ152	1.5K	1	
R3024		ERD10TJ561	560	1	
R3025		EVNK6AA00B23	Variable 2K	1	
R3026		ERD10TJ333	33K	1	
R3027		ERD10TJ223	22K	1	
R3028		ERD10TJ271	270	1	
R3029,3030		ERD10TJ273	27K	2	
R3031		ERD10TJ561	560	1	
R3032		ERD10TJ272	2.7K	1	
R3033		ERD10TJ562	5.6K	1	
R3034		ERD10TJ682	6.8K	1	
R3035		ERD10TJ122	1.2K	1	
R3036		ERD10TJ152	1.5K	1	
R3037		ERD10TJ122	1.2K	1	
R3038		ERD10TJ221	220	1	
R3039		ERD10TJ560	56	1	
R3040,3041		ERD10TJ682	6.8K	2	
R3042,3043		ERD10TJ560	56	2	
R3044		ERD10TJ100	10	1	
R3045		ERD10TJ272	2.7K	1	
R3046		ERD10TJ473	47K	1	
R3047		ERD10TJ272	2.7K	1	
R3048		ERD10TJ100	10	1	
R3049		ERD10TJ152	1.5K	1	
R3050		ERD12FJ680	1/2W 68	1	
R3052		ERD10TJ471	470	1	
R3055		ERD10TJ273	27K	1	
R3056		ERD10TJ153	15K	1	
R3057		ERD10TJ222	2.2K	1	
R3058		ERD10TJ273	27K	1	
R3059		ERD10TJ102	1K	1	
R3060		ERD10TJ153	15K	1	
R3061		ERD10TJ102	1K	1	
R3062,3063		ERD10TJ562	5.6K	2	
R3064		ERD10TJ223	22K	1	
R3065		ERD10TJ563	56K	1	
R3066		ERD10TJ223	22K	1	
R3067		ERD10TJ152	1.5K	1	
R3068		ERD10TJ331	330	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R3069		ERD10TJ152	1.5K	1	
R3070		ERD10TJ823	82K	1	
R3071		EVNK6AA00B24	Variable 20K	1	
R3072,3073		ERD10TJ473	47K	2	
R3075		ERD10TJ391	390	1	
R3076		ERD10TJ822	8.2K	1	
R3077		ERD10TJ153	15K	1	
R3078		ERD10TJ822	8.2K	1	
R3079		ERD10TJ391	390	1	
R3082		ERD10TJ102	1K	1	
R3083		ERD10TJ821	820	1	
R3084		ERD10TJ330	33	1	
R3085		ERD10TJ121	120	1	
R3086		ERD10TJ102	1K	1	
R3087		ERD10TJ103	10K	1	
R3088		ERD10TJ331	330	1	
R3089		ERD10TJ222	2.2K	1	
R3090		ERD10TJ331	330	1	
R3091		ERD10TJ271	270	1	
R3092		ERD10TJ273	27K	1	
R3093		ERD10TJ271	270	1	
R3094		ERD10TJ183	18K	1	
R3095		ERD10TJ102	1K	1	
R3096		ERD10TJ222	2.2K	1	
R3097		ERD10TJ102	1K	1	
R3098		ERD10TJ333	33K	1	
R3099		ERD10TJ562	5.6K	1	
R3100		ERD10TJ102	1K	1	
R3101		ERD10TJ121	120	1	
R3103		ERD10TJ102	1K	1	
R3104		ERD10TJ222	2.2K	1	
R3105		ERD10TJ102	1K	1	
R3106		ERD10TJ680	68	1	
R3107,3108		ERD10TJ561	560	2	
R3109		ERD10TJ472	4.7K	1	
R3110		ERD10TJ272	2.7K	1	
R3111		EVNK6AA00B23	Variable 2K	1	
R3113,3114		ERD10TJ102	1K	2	
R3116		ERD25TJ121	1/4W 120	1	
R3117,3118		ERD10TJ563	56K	2	
R3119		ERD10TJ102	1K	1	
R3120		ERD25TJ474	1/4W 470K	1	
R3121		ERD10TJ102	1K	1	
R3122		ERD10TJ152	1.5K	1	
R3123		ERD10TJ102	1K	1	
R3124		ERD10TJ222	2.2K	1	
R3125		ERD10TJ271	270	1	
R3126		ERD10TJ391	390	1	
R3127,3128		ERD10TJ102	1K	2	
R3129		EVNK6AA00B24	Variable 20K	1	
R3130		ERD10TJ153	15K	1	
R3131		ERD10TJ821	820	1	
R3132		ERD10TJ472	4.7K	1	
R3133		ERD10TJ181	180	1	
R3134		ERD10TJ561	560	1	
R3135		ERD10TJ151	150	1	
R3136		EVNK6AA00B13	Variable 1K	1	
R3137		ERD10TJ333	33K	1	
R3138		ERD10TJ103	10K	1	
R3139		ERD10TJ122	1.2K	1	
R3140		ERD10TJ271	270	1	
R3141		ERD10TJ221	220	1	
R3142,3143		ERD10TJ563	56K	2	
R3144		ERD10TJ561	560	1	
R3145		ERD10TJ103	10K	1	
R3146		ERD10TJ562	5.6K	1	
R3147		ERD10TJ222	2.2K	1	
R3148		ERD10TJ122	1.2K	1	
R3149		ERD10TJ822	8.2K	1	
R3150		ERD10TJ183	18K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R3150		ERD10TJ122	1.2K	1	
R3152		ERD10TJ563	56K	1	
R3153		EVNK6AA00B24	Variable 20K	1	
R3154		ERD25TJ125	1/4W 1.2M	1	
R3155,3156		ERD10TJ682	6.8K	2	
R3157		EVJEA312B15	100K	1	
R3158		ERD10TJ183	18K	1	
R3159		ERD10TJ104	100K	1	
R3160		ERD25TJ102	1/4W 1K	1	
R3161		ERD10TJ123	12K	1	
R3163		ERD10TJ152	1.5K	1	
R3164		ERD10TJ272	2.7K	1	
R3165		ERD10TJ472	4.7K	1	
R3166		ERD10TJ563	56K	1	
R3167,3168		ERD10TJ562	5.6K	2	
R3169		ERD10TJ333	33K	1	
R3170		ERD10TJ222	2.2K	1	
R3171,3172		ERD10TJ223	22K	2	
R3206,3207		EVNK6AA00B13	Variable 1K	2	
R3208		EVNK6AA00B23	Variable 2K	1	
			Capacitors		
C3001		ECCW1H390KC	Ceramic 50V 39P	1	
C3002		ECEA0JS470	Electrolytic 6.3V 47	1	
C3003		ECCW1H180KC	Ceramic 50V 18P	1	
C3004		ECEA1AS470	Electrolytic 10V 47	1	
C3005		VCY25473KX	*Semiconductor* 25V 0.047	1	
C3006		ECEA1AS221	Electrolytic 10V 220	1	
C3007		ECEA6N47	Electrolytic 6V 47	1	
C3008		ECEA1AS101	Electrolytic 10V 100	1	
C3009		ECEA1ES4R7	Electrolytic 25V 4.7	1	
C3010		ECEA0JS221	Electrolytic 6.3V 220	1	
C3011		VCY25333KX	Semiconductor 25V 0.033	1	
C3012		VCKW1H621JSA	Ceramic 50V 620P	1	
C3013		ECCW1H270KC	Ceramic 50V 27P	1	
C3014,3015		ECKW1H103PF	Ceramic 50V 0.01	2	
C3016		ECEA1AS470	Electrolytic 10V 47	1	
C3017		ECEA1CS221	Electrolytic 16V 220	1	
C3018		ECEA6N47	Electrolytic 6V 47	1	
C3019		ECEA1CS470	Electrolytic 16V 47	1	
C3020		ECEA1ES4R7	Electrolytic 25V 4.7	1	
C3021		ECCW1H560KC	Ceramic 50V 56P	1	
C3022		ECV1ZW50X44	Trimmer 1W 50pF	1	
C3023		ECKW1H151KB	Ceramic 50V 150P	1	
C3024		ECCW1H820KC	Ceramic 50V 82P	1	
C3025,3026		ECKW1H103PF	Ceramic 50V 0.01	2	
C3027		ECKW1H181KB	Ceramic 50V 180P	1	
C3028		ECCW1H680KC	Ceramic 50V 68P	1	
C3029		ECKW1H103PF	Ceramic 50V 0.01	1	
C3030		ECKW1H391KB	Ceramic 50V 390P	1	
C3032		ECEA1CS100	Electrolytic 16V 10	1	
C3033,3034		ECKW1H103PF	Ceramic 50V 0.01	2	
C3035		ECQV05104KZW	Myler 50V 0.1	1	
C3036		ECKW1H103PF	Ceramic 50V 0.01	1	
C3037,3038		ECV1ZW50X44	Trimmer 1W 50pF	2	
C3039		ECEA1CS100	Electrolytic 16V 10	1	
C3040-3043		ECKW1H103PF	Ceramic 50V 0.01	4	
C3044		VCY25473KX	Semiconductor 25V 0.047	1	
C3045		ECEA1CS470	Electrolytic 16V 47	1	
C3046		ECKW1H103PF	Ceramic 50V 0.01	1	
C3047		ECEA1CS470	Electrolytic 16V 47	1	
C3048		ECEA1HS010	*Electrolytic* 50V 1	1	
C3049		ECEA1HS010	Electrolytic 50V 1	1	
C3050		ECKW1H103PF	Ceramic 50V 0.01	1	
C3051		ECEA1CS470	Electrolytic 16V 47	1	
C3052		ECKW1H103PF	Ceramic 50V 0.01	1	
C3053		ECEA1HS010	Electrolytic 50V 1	1	
C3054		ECEA1CS100	Electrolytic 16V 10	1	
C3055		ECKW1H103PF	Ceramic 50V 0.01	1	
C3056		ECCW1H470KC	Ceramic 50V 47P	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C3057		ECKW1H103PF	Ceramic 50V 0.01	1	
C3058		ECCW1H470KC	Ceramic 50V 47P	1	
C3059		ECKW1H103PF	Ceramic 50V 0.01	1	
C3060		ECCW1H150KC	Ceramic 50V 15P	1	
C3061		VCY25153KX	Semiconductor 25V 0.015	1	
C3062-3064		ECKW1H103PF	Ceramic 50V 0.01	3	
C3065,3066		ECCW1H270KC	Ceramic 50V 27P	2	
C3067		ECCW1H330KC	Ceramic 50V 33P	1	
C3068		ECKW1H103PF	Ceramic 50V 0.01	1	
C3069		ECCW1H390KC	Ceramic 50V 39P	1	
C3070,3071		ECKW1H103PF	Ceramic 50V 0.01	2	
C3072		ECEA1CS470	Electrolytic 16V 47	1	
C3073		ECKW1H103PF	Ceramic 50V 0.01	1	
C3074		VCKW1H431JSA	Ceramic 50V 430P	1	
C3075		ECCW1H180KC	Ceramic 50V 18P	1	
C3076		ECCW1H390KC	Ceramic 50V 39P	1	
C3077		ECKW1H471KB	Ceramic 50V 470P	1	
C3078		ECKW1H103PF	Ceramic 50V 0.01	1	
C3079		ECEA1AS471	Electrolytic 10V 470	1	
C3080		ECEA0JS471	Electrolytic 6.3V 470	1	
C3081		ECEA0JS470	Electrolytic 6.3V 47	1	
C3082		ECCW1H220KC	Ceramic 50V 22P	1	
C3083		ECCW1H180KC	Ceramic 50V 18P	1	
C3084		ECEA1HS010	Electrolytic 50V 1	1	
C3085		ECEA1CS101	Electrolytic 16V 100	1	
C3086		ECEA0JS470	Electrolytic 6.3V 47	1	
C3087		VCY25182KX	Semiconductor 25V 0.0018	1	
C3088		ECKW1H101KB	Ceramic 50V 100P	1	
C3089		ECKW1H103PF	Ceramic 50V 0.01	1	
C3090		ECEA0JS470	Electrolytic 6.3V 47	1	
C3091,3092		ECKW1H103PF	Ceramic 50V 0.01	2	
C3093		ECEA1CS100	Electrolytic 16V 10	1	
C3094		ECCW1H330KC	Ceramic 50V 33P	1	
C3095		ECEA1CS100	Electrolytic 16V 10	1	
C3096		VCKW1H391JSA	Ceramic 50V 390P	1	
C3097		VCKW1H182JSA	Ceramic 50V 0.0018	1	
C3098		ECEA1CS100	Electrolytic 16V 10	1	
C3099		ECKW1H181KB	Ceramic 50V 180P	1	
C3100		ECKW1H103PF	Ceramic 50V 0.01	1	
C3101		ECKW1H181KB	Ceramic 50V 180P	1	
C3102		ECEA0JS470	Electrolytic 6.3V 47	1	
C3103		ECEA1CS100	Electrolytic 16V 10	1	
C3104		ECEA1CS470	Electrolytic 16V 47	1	
C3105		ECKW1H121KB	Ceramic 50V 120P	1	
C3106		*ECEA1CS100*	*Electrolytic 16V 10*	1	
C3107		ECCW1H220KC	Ceramic 50V 22P	1	
C3108		ECCW1H151KC	Ceramic 50V 150P	1	
C3109		ECCW1H121KC	Ceramic 50V 120P	1	
C3110		ECEA1CS100	Electrolytic 16V 10	1	
C3111,3112		ECKW1H561KB	Ceramic 50V 560P	2	
C3113		ECKW1H271KB	Ceramic 50V 270P	1	
C3115		ECKW1H103PF	Ceramic 50V 0.01	1	
C3116		ECCW1H270KC	Ceramic 50V 27P	1	
C3117		ECEA1CS100	Electrolytic 16V 10	1	
			Coils		
L3001		VLQEL06F680K	68µH	1	
L3002,3003		VLQEL06F221K	220µH	2	
L3004		VLQEL06F151K	150µH	1	
L3005		VLQEL06F820K	82µH	1	
L3006		VLQEL06F220K	22µH	1	
L3007,3008		VLQEL06F221K	220µH	2	
L3009		VLQEL06F100K	10µH	1	
L3010		VLQEL06F3R3K	3.3µH	1	
L3011,3012		VLQEL06F220K	22µH	2	
L3013		VLQEL06F3R3K	3.3µH	1	
L3014		VLQEL06F471K	470µH	1	
L3015		VLQEL06F221K	220µH	1	
L3016		VLQEL06F180K	18µH	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
L3017,3018		VLQEL06F221K	220μH	2	
L3019		VLQEL06F151K	150μH	1	
L3020		VLQEL06F330K	33μH	1	
L3021		VLQEL06F1R8K	1.8μH	1	
L3022		VLQEL06F221K	220μH	1	
L3023		VLQEL06F220K	22μH	1	
L3024		VLQEL06F471K	470μH	1	
L3025		VLQEL06F100K	10μH	1	
L3026		VLQEL06F471K	470μH	1	
L3027		VLQEL06F100K	10μH	1	
L3028		VLQEL06F221K	220μH	1	
L3029		VLQEL06F150K	15μH	1	
L3030		VLQEL06F2R2K	2.2μH	1	
			Filters		
FL3001		VLF0056		1	
FL3002		VLF0112		1	
FL3003		VLF0115		1	
FL3004		VLF0089		1	
			Delay Line		
DL3001		VLD0012	2H	1	
			Switch		
S3001		VSS0052	Slide Switch	1	
			Connectors		
P3001		VJP1144	6P	1	
P3004		VJP1143	5P	1	
P3005		VJP1144	6P	1	
P3006		VJP1146	10P	1	
P3007,3008		VJP1141	2P	2	
P3009		VJP1144	6P	1	
P3010		VJP1145	8P	1	
P3011		VJP1142	3P	1	
P3013		VJP1143	5P	1	
P002		VJP1144	6P	1	
P003		VJP1141	2P	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			VIDEO COLOUR		
			PRINTED CIRCUIT BOARD		
			(Colour Section)		
			Integrated Circuits		
IC8001		AN6360	Chroma ACC	1	
IC8002		AN6352	OSC Divider	1	
IC8003		AN6362	Chroma AFC	1	
IC8004		AN6371	Chroma APC	1	
IC8005		AN6551	OP Amp.	1	
			Transistors		
Q8001,8003		2SD636		2	
Q8004		2SC2206		1	
Q8005		2SD636		1	
Q8006		2SC2206		1	
Q8007		2SD636		1	
Q8008,8009		2SC2206		2	
Q8010,8011		2SD636		2	
Q8012		2SB641		1	
			Diodes		
D8001-8010		MA165		10	
			Thermister		
TH8001		ERD2FHL102S		1	
			Resistors		
R8001		ERD10TJ223	22K	1	
R8002		ERD10TJ153	15K	1	
R8003		ERD10TJ682	6.8K	1	
R8004		ERD10TJ562	5.6K	1	
R8007		EVNK6AA00B23	Variable 2K	1	
R8008		ERD10TJ102	1K	1	
R8009		ERD10TJ122	1.2K	1	
R8010		ERD10TJ563	56K	1	
R8011		ERD10TJ103	10K	1	
R8012		ERD10TJ102	1K	1	
R8013		ERD10TJ181	180	1	
R8014		ERD10TJ122	1.2K	1	
R8015		ERD25TJ684	1/4W 680K	1	
R8016		ERD10TJ153	15K	1	
R8017,8018		ERD10TJ562	5.6K	2	
R8019		ERD10TJ153	15K	1	
R8020		ERD10TJ391	390	1	
R8021		EVNK6AA00B14	Variable 10K	1	
R8022-8025		ERD10TJ391	390	4	
R8026		ERD10TJ562	5.6K	1	
R8027		ERD10TJ273	27K	1	
R8028		ERD10TJ102	1K	1	
R8029		ERD10TJ331	330	1	
R8030		EVNK6AA00B23	Variable 2K	1	
R8031		ERD25TJ684	1/4W 680K	1	
R8032		ERD10TJ102	1K	1	
R8033		ERD10TJ122	1.2K	1	
R8034,8035		ERD10TJ102	1K	2	
R8036		ERD10TJ561	560	1	
R8037		ERD10TJ152	1.5K	1	
R8038		ERD10TJ102	1K	1	
R8039		ERD10TJ182	1.8K	1	
R8040		ERD10TJ102	1K	1	
R8041		ERD10TJ122	1.2K	1	
R8042		ERD10TJ102	1K	1	
R8043		ERD10TJ103	10K	1	
R8044		ERD10TJ682	6.8K	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
R8045	ERD10TJ103	10K	1	
R8046	ERD10TJ562	5.6K	1	
R8047	ERD10TJ103	10K	1	
R8048	ERD10TJ222	2.2K	1	
R8049	ERD25TJ821	1/4W 820	1	
R8050	EVNK6AA00B52	Variable 500	1	
R8051,8052	ERD10TJ562	5.6K	2	
R8053	ERD10TJ122	1.2K	1	
R8054	ERD10TJ472	4.7K	1	
R8055	ERD10TJ392	3.9K	1	
R8056	ERD10TJ182	1.8K	1	
R8057	ERD10TJ102	1K	1	
R8058	ERD25TJ274	270K	1	
R8059,8060	ERD10TJ222	2.2K	2	
R8061	ERD25TJ224	1/4W 220K	1	
R8064	ERD10TJ102	1K	1	
R8065	ERD10TJ472	4.7K	1	
R8066	ERD10TJ562	5.6K	1	
R8067	ERD10TJ152	1.5K	1	
R8068	ERD10TJ222	2.2K	1	
R8069	ERD10TJ391	390	1	
R8070,8071	ERD10TJ563	56K	2	
R8072	ERD10TJ272	2.7K	1	
R8073	ERD10TJ561	560	1	
R8074	ERD10TJ332	3.3K	1	
R8075	ERD10TJ102	1K	1	
R8076	ERD10TJ102	1K	1	
R8077	EVNK6AA00B54	Variable 50K	1	
R8078	ERD25TJ564	1/4W 560K	1	
R8079	ERD10TJ102	1K	1	
R8080	ERD10TJ333	33K	1	
R8081	ERD10TJ153	15K	1	
R8082	ERD10TJ102	1K	1	
R8083	ERD10TJ104	100K	1	
R8084	ERD25TJ334	330K	1	
R8085	ERD10TJ183	18K	1	
R8086	ERD10TJ473	47K	1	
R8087	ERD10TJ820	82	1	
		Capacitors		
C8001	ECQV05104KZW	Myler 50V 0.1	1	
C8002	ECEA1HS010	Electrolytic 50V 1	1	
C8003-8007	ECKW1H103PF	Ceramic 50V 0.01	5	
C8008	ECCW1H390KC	Ceramic 50V 39P	1	
C8009,8010	ECKW1H103PF	Ceramic 50V 0.01	2	
C8011	ECCW1H220KC	Ceramic 50V 22P	1	
C8012-8014	ECKW1H103PF	Ceramic 50V 0.01	3	
C8015	ECEA1CS470	Electrolytic 16V 47	1	
C8016,8017	ECKW1H103PF	Ceramic 50V 0.01	2	
C8018	ECKW1H681KB	Ceramic 50V 680P	1	
C8019	ECKW1H103PF	Ceramic 50V 0.01	1	
C8020	ECKW1H102KB	Ceramic 50V 0.001	1	
C8021	ECQV05104KZW	Myler 50V 0.1	1	
C8022	ECKW1H101KB	Ceramic 50V 100P	1	
C8023	ECKW1H271KB	Ceramic 50V 270P	1	
C8024	ECV1ZW20X44	Trimmer 1W 20pF	1	
C8025	ECCW1H100DC	Ceramic 50V 10P	1	
C8026	ECKW1H103PF	Ceramic 50V 0.01	1	
C8027	ECEA1CS100	Electrolytic 16V 10	1	
C8028	VCY25472KX	Semiconductor 25V 0.0047	1	
C8029	VCKW1H821JSA	Ceramic 50V 820P	1	
C8030	ECEA1CS330	Electrolytic 16V 33	1	
C8031	ECEA1CS470	Electrolytic 16V 47	1	
C8032	ECEA1HS010	Electrolytic 50V 1	1	
C8033	ECQV05104KZW	Myler 50V 0.1	1	
C8034	ECEA1CS100	Electrolytic 16V 10	1	
C8035	VCY25183KX	Semiconductor 25V 0.018	1	
C8036	ECCW1H181KC	Ceramic 50V 180P	1	
C8037	ECCW1H121KC	Ceramic 50V 120P	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
C8038	ECKW1H821KB	Ceramic 50V 820P	1	
C8039	ECEA1HS010	Electrolytic 50V 1	1	
C8040	VCY25122KX	Semiconductor 25V 0.0012	1	
C8041	ECKW1H561KB	Ceramic 50V 560P	1	
C8042	ECKW1H221KB	Ceramic 50V 220P	1	
C8043,8044	ECKW1H103PF	Ceramic 50V 0.01	2	
C8045	ECEA1CS100	Electrolytic 16V 10	1	
C8046	ECKW1H103PF	Ceramic 50V 0.01	1	
C8047	ECCW1H040CC	Ceramic 50V 4P	1	
C8048	ECCW1H050DC	Ceramic 50V 5P	1	
C8049	ECCW1H060DC	Ceramic 50V 6P	1	
C8050	ECV1ZW50X44	Trimmer 1W 50pF	1	
C8051	ECEA1CS470	Electrolytic 16V 47	1	
C8052-8054	ECKW1H103PF	Ceramic 50V 0.01	3	
C8055	ECCW1H150KC	Ceramic 50V 15P	1	
C8056	ECKW1H103PF	Ceramic 50V 0.01	1	
C8057	ECEA1HS2R2	Electrolytic 50V 2.2	1	
C8058	ECKW1H103PF	Ceramic 50V 0.01	1	
C8060	ECKW1H103PF	Ceramic 50V 0.01	1	
C8061	ECEA1CS100	Electrolytic 16V 10	1	
C8062	ECCW1H330KC	Ceramic 50V 33P	1	
C8063	ECCW1H560KC	Ceramic 50V 56P	1	
C8064	ECKW1H103PF	Ceramic 50V 0.01	1	
C8065	ECCW1H560KC	Ceramic 50V 56P	1	
C8066	ECKW1H331KB	Ceramic 50V 330P	1	
C8067	ECEA1HS010	Electrolytic 50V 1	1	
C8068	ECKW1H103PF	Ceramic 50V 0.01	1	
C8069	ECEA1HS010	Electrolytic 50V 1	1	
C8070	ECKW1H221KB	Ceramic 50V 220P	1	
		Coils		
L8001	VLQEL06F560K	56μH	1	
L8002	VLQEL06F221K	220μH	1	
L8003,8004	VLQEL06F6R8K	6.8μH	2	
L8005	VLQEL06F330K	33μH	1	
L8006	VLQEL06F101K	100μH	1	
L8007,8008	VLQEL06F221K	220μH	2	
L8009	VLQ02F682K	6.8mH	1	
L8010	VLQEL06F560K	56μH	1	
L8011	VLQEL06F470K	47μH	1	
L8012	VLQEL06F221K	220μH	1	
L8013	VLQEL06F390K	39μH	1	
L8014	VLQEL06F3R9K	3.9μH	1	
L8015	VLQEL06F221K	220μH	1	
		Filters		
FL8001	VLF0113		1	
FL8002	VLF0085		1	
FL8003	VLF0094		1	
FL8004	VLF0090		1	
FL8005	VLF0095		1	
		Delay Line		
DL8001	VLD0014	2H	1	
		Oscillators		
X8001	VSX0066	Crystal	1	
X8002	VSX0069	Crystal	1	
		Connectors		
P002	VJP1144	6P	1	
P003	VJP1141	2P	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			Miscellaneous		
		VJH24	Test Pin	26	
		VJH0118	Front Jack Unit	1	
		VJS1155	Pin for Connector	11	
		VJS1143	5P	1	
		VJS1144	6P	1	
		VMX0226	Ceramic Spacer	2	
		VSC0492	Shield Case	1	
		VSC0493	Shield Case	1	
		VSC0494	Shield Case	1	
			SERVO CONTROL		
			PRINTED CIRCUIT BOARD		
			Integrated Circuits		
IC2001		AN6350		1	
IC2002		AN6677		1	
IC2003		AN6345		1	
IC2004		AN6341		1	
IC2005		AN640G		1	
IC2006		AN6345		1	
IC2007		μPD4528C		1	
IC2008		μPD4011C		1	
			Transistors		
Q2001-2003		2SD636		3	
Q2004		2SD889		1	
Q2005		2SD636		1	
Q2006		2SD889		1	
Q2007,2008		2SD636		2	
Q2009		2SB641		1	
Q2010-2013		2SD636		4	
Q2015		2SB641		1	
Q2016-2018		2SD636		3	
Q2019		2SD389		1	
Q2020		2SB641		1	
Q2021		2SD636		1	
Q2022		2SB641		1	
Q2023		2SD636		1	
Q2024		2SB641		1	
Q2025-2029		2SD636		5	
Q2030		2SB641		1	
Q2032		2SD636		1	
Q2033		2SB641		1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
Q2034		2SD636		1	
Q2035		2SB641		1	
Q2036		2SD636		1	
Q2037		2SB641		1	
Q2038		2SD636		1	
Q2039		2SB641		1	
Q2040		2SD636		1	
Q2043		2SD636		1	
Q2045		2SB641		1	
Q2046,2047		2SD636		2	
Q2048		2SD889		1	
Q2049-2051		2SD636		3	
Q2052		2SB761		1	
Q2053		2SD856		1	
Q2054		2SB761		1	
Q2055		2SD856		1	
Q2056		2SB761		1	
Q2057		2SD856		1	
Q2058		2SD636		1	
			Diodes		
D2001-2017		MA165		17	
D2020-2030		MA165		11	
D2032		MA165		1	
D2033		MA165		1	
D2034-2039		MA165		6	
D2040		RD5R1EB	Zener	1	
D2041		MA26W0		1	
D2042-2047		MA165		6	
			Resistors		
R2001,2002		ERD10TJ104	100K	2	
R2003		ERD10TJ562	5.6K	1	
R2004		ERD10TJ104	100K	1	
R2005		ERD10TJ333	33K	1	
R2006		ERD10TJ104	100K	1	
R2007,2008		ERD10TJ683	68K	2	
R2009		ERD10TJ563	56K	1	
R2010		ERD10TJ183	18K	1	
R2011		ERD10TJ103	10K	1	
R2012		ERD10TJ153	15K	1	
R2013		ERD10TJ333	33K	1	
R2014		ERD10TJ332	3.3K	1	
R2015		ERD10TJ154	150K	1	
R2016		EVNK6AA00B54	Variable 50K	1	
R2017		ERD10TJ184	180K	1	
R2018		ERD10TJ332	3.3K	1	
R2019		ERD10TJ473	47K	1	
R2020,2021		ERD10TJ333	33K	2	
R2022		ERD10TJ563	56K	1	
R2023		ERD10TJ153	15K	1	
R2024		EVNK6AA00B54	Variable 50K	1	
R2025		ERD10TJ124	120K	1	
R2026,2027		ERD25TJ105	1/4W 1M	2	
R2028		ERD10TJ682	6.8K	1	
R2029,2030		EVNK6AA00B54	Variable 50K	2	
R2031		ERD10TJ682	6.8K	1	
R2032		EVNK6AA00B15	Variable 100K	1	
R2033		ERD10TJ683	68K	1	
R2034		ERD10TJ123	12K	1	
R2035		ERD25TG6802	±2% 1/4W 68K	1	
R2036		ERD10TJ332	3.3K	1	
R2037		ERD25TG4701	±2% 1/4W 4.7K	1	
R2038		ERD10TJ271	270	1	
R2039		ERD25TG2201	±2% 1/4W 2.2K	1	
R2040,2041		ERD10TJ562	5.6K	2	
R2042		ERD10TJ473	47K	1	
R2043		ERD10TJ561	560	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R2044		ERD10TJ152	1.5K	1	
R2045		ERD10TJ273	27K	1	
R2046		ERD10TJ471	470	1	
R2047		ERD10TJ153	15K	1	
R2048		ERD10TJ104	100K	1	
R2049		ERD10TJ152	1.5K	1	
R2050		ERD10TJ123	12K	1	
R2051		ERD10TJ103	10K	1	
R2052		ERD25TG1803	±2% 1/4W 180K	1	
R2053		ERD10TJ104	100K	1	
R2054		ERD10TJ153	15K	1	
R2055		ERD10TJ332	3.3K	1	
R2056,2057		ERD10TJ563	56K	2	
R2058-2060		ERD25TJ470	1/4W 47	3	
R2061		ERX12ANJR47	Metal Oxide 1/2W 0.47	1	
R2062		ERD10TJ124	120K	1	
R2063		ERD10TJ153	15K	1	
R2064		ERD10TJ272	2.7K	1	
R2065		ERD10TJ103	10K	1	
R2066		ERD10TJ683	68K	1	
R2067		ERD10TJ562	5.6K	1	
R2068		ERD10TJ104	100K	1	
R2069		ERD10TJ333	33K	1	
R2070		ERD10TJ683	68K	1	
R2071		ERD10TJ333	33K	1	
R2072		ERD10TJ104	100K	1	
R2073		ERD10TJ183	18K	1	
R2074		ERD10TJ223	22K	1	
R2075		ERD10TJ154	150K	1	
R2076		ERD10TJ474	470K	1	
R2078		ERD10TJ683	68K	1	
R2079		ERD10TJ333	33K	1	
R2080,2081		ERD10TJ104	100K	2	
R2082		ERD10TJ473	47K	1	
R2083		ERD10TJ563	56K	1	
R2086		ERD10TJ104	100K	1	
R2087		ERD10TJ683	68K	1	
R2088		EVNK6AA00B24	Variable 20K	1	
R2089		ERD10TJ333	33K	1	
R2091		EVNK6AA00B24	Variable 20K	1	
R2092		ERD10TJ333	33K	1	
R2094		EVNK6AA00B24	Variable 20K	1	
R2095		ERD10TJ333	33K	1	
R2096		ERD10TJ683	68K	1	
R2097		ERD10TJ333	33K	1	
R2098		ERD10TJ154	150K	1	
R2099		ERD10TJ104	100K	1	
R2100		ERD10TJ473	47K	1	
R2101,2102		ERD10TJ154	150K	2	
R2103,2104		ERD10TJ563	56K	2	
R2105		ERD10TJ683	68K	1	
R2106		ERD10TJ153	15K	1	
R2107		ERD10TJ154	150K	1	
R2108		ERD10TJ103	10K	1	
R2109		ERD10TJ683	68K	1	
R2110		ERD10TJ393	39K	1	
R2111		ERD10TJ563	56K	1	
R2113		ERD10TJ563	56K	1	
R2114		ERD10TJ102	1K	1	
R2115		ERD10TJ563	56K	1	
R2116		ERD10TJ393	39K	1	
R2117		ERD10TJ153	15K	1	
R2118		ERD10TJ103	10K	1	
R2119		ERD10TJ223	22K	1	
R2120		ERD10TJ222	2.2K	1	
R2121		ERD10TJ563	56K	1	
R2123		ERD10TJ333	33K	1	
R2124		ERD10TJ183	18K	1	
R2125		EVNK6AA00B25	Variable 200K	1	
R2126		ERD10TJ563	56K	1	
R2127		EVNK6AA00B15	Variable 100K	1	
R2128		ERD10TJ393	39K	1	
R2129		ERD10TJ563	56K	1	
R2130		ERD10TJ183	18K	1	
R2131		ERC14GJ685	6.8M	1	
R2132		ERD25TG3901	±2% 1/4W 3.9K	1	
R2133		ERD25TG2201	±2% 1/4W 2.2K	1	
R2134,2135		ERD10TJ221	220	2	
R2136		ERD25TG8200	±2% 1/4W 820	1	
R2137		ERD25TG1803	±2% 1/4W 180K	1	
R2138		ERD10TJ682	6.8K	1	
R2139		ERD25TG1203	±2% 1/4W 120K	1	
R2140		ERD25TG5602	±2% 1/4W 56K	1	
R2141		ERD10TJ153	15K	1	
R2142		ERD10TJ103	10K	1	
R2143-2145		ERG2ANJ151	2W 150	3	
R2146		ERD10TJ103	10K	1	
R2147		ERG2ANJ151	2W 150	1	
R2148		ERD10TJ391	390	1	
R2149		ERD10TJ103	10K	1	
R2150		ERG2ANJ820	2W 82	1	
R2151		ERG2ANJ151	2W 150	1	
R2152		ERD10TJ103	10K	1	
R2153		ERG2ANJ820	2W 82	1	
R2154		ERG2ANJ151	2W 150	1	
R2155		ERD10TJ103	10K	1	
R2156		ERG2ANJ820	2W 82	1	
R2157		ERD10TJ103	10K	1	
R2158		ERD10TJ392	3.9K	1	
R2159		ERD10TJ123	12K	1	
R2160		ERD10TJ332	3.3K	1	
R2161		ERD10TJ333	33K	1	
R2162		ERD10TJ683	68K	1	
R2163		ERD10TJ122	1.2K	1	
R2164		ERD10TJ103	10K	1	
R2165		ERD10TJ470	47	1	
R2166		ERD10TJ563	56K	1	
R2167		ERD10TJ103	10K	1	
R2168		ERD10TJ333	33K	1	
R2169		ERD10TJ103	10K	1	
R2170		ERD10TJ272	2.7K	1	
R2171		ERD10TJ333	33K	1	
R2172		ERD10TJ472	4.7K	1	
R2173		ERD10TJ102	1K	1	
R2174		ERD10TJ563	56K	1	
R2176		ERD10TJ102	1K	1	
R2177		ERD10TJ273	27K	1	
R2178		ERD10TJ392	3.9K	1	
R2179		ERD10TJ152	1.5K	1	
R2180		ERD10TJ122	1.2K	1	
R2181		ERD10TJ103	10K	1	
R2182		ERD10TJ122	1.2K	1	
R2183		ERD10TJ272	2.7K	1	
R2186		ERD10TJ104	100K	1	
R2187		ERD10TJ473	47K	1	
R2188		ERD10TJ153	15K	1	
R2189		ERD10TJ472	4.7K	1	
R2190		ERD10TJ682	6.8K	1	
R2191		ERD10TJ152	1.5K	1	
R2192		ERD10TJ102	1K	1	
R2193		ERD25TJ155	1/4W 1.5M	1	
R2194		ERD10TJ333	33K	1	
R2195		EVNK6AA00B24	Variable 20K	1	
R2197,2198		EVNK6AA00B24	Variable 20K	2	
R2199		ERD10TJ393	39K	1	
R2200		EVNK6AA00B24	Variable 20K	1	
R2202-2205		ERD10TJ333	33K	4	
R2206-2209		ERD10TJ154	150K	4	
R2210		ERD10TJ104	100K	1	
R2211		ERD10TJ333	33K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R2212		ERD10TJ683	68K	1	
R2213		ERD10TJ333	33K	1	
R2214		ERD10TJ683	68K	1	
R2215		ERD10TJ333	33K	1	
R2218		ERD10TJ333	33K	1	
R2223		ERD10TJ391	390	1	
R2224		ERX1ANJR82	1W 0.82	1	
R2225-2227		ERD10TJ103	10K	3	
R2228		ERD10TJ333	33K	1	
R2229		ERD10TJ562	5.6K	1	
R2230,2231		ERD10TJ223	22K	1	
			Capcitors		
C2001		ECQM1H472KZW	Myler 50V 0.0047	1	
C2002		ECEA1HS010	Electrolytic 50V 1	1	
C2003		ECQM1H103KZW	Myler 50V 0.01	1	
C2004		ECQV05334KZ	Myler 50V 0.33	1	
C2005		ECQM1H683KZW	Myler 50V 0.068	1	
C2006		ECSF35ER22	Tantalum 35V 0.22	1	
C2007,2008		ECEA1HS010	Electrolytic 50V 1	2	
C2009,2010		ECQM1H683KZW	Myler 50V 0.068	2	
C2011		ECQM1H223KZW	Myler 50V 0.022	1	
C2012,2013		ECQV05104KZ	Myler 50V 0.1	2	
C2014		ECEA16Z100	Electrolytic 16V 10	1	
C2015		ECQM1H103KZW	Myler 50V 0.01	1	
C2016		ECEA1CS100	Electrolytic 16V 10	1	
C2017		ECQM1H562KZW	Myler 50V 0.0056	1	
C2018		ECEA50ZR68	Electrolytic 50V 0.68	1	
C2019-2021		ECEA50N1	Electrolytic 50V 1	3	
C2022		ECEA1CS101	Electrolytic 16V 100	1	
C2023		ECQM1H103KZW	Myler 50V 0.01	1	
C2024		ECQM1H333KZW	Myler 50V 0.033	1	
C2025		ECSF16E3R3	Tantalum 16V 3.3	1	
C2026		ECEA1ES470	Electrolytic 25V 47	1	
C2027		ECEA1CS100	Electrolytic 16V 10	1	
C2028		ECQM1H822KZW	Myler 50V 0.0082	1	
C2029-2031		ECEA50ZR22	Electrolytic 50V 0.22	3	
C2032		ECEA50Z2R2	Electrolytic 50V 2.2	1	
C2033		ECKD1H103KB	Ceramic 50V 0.01	1	
C2034		ECQV05683JZ	Myler 50V 0.058	1	
C2035		ECQV05184KZ	Myler 50V 0.18	1	
C2036		ECQV05104KZ	Myler 50V 0.1	1	
C2037		ECQV05104KZ	Myler 50V 0.1	1	
C2038		ECQM1H683KZW	Myler 50V 0.068	1	
C2039,2040		ECEA1CS470	Electrolytic 16V 47	2	
C2041		ECEA50ZR1	Electrolytic 50V 0.1	1	
C2042		ECEA1CS221	Electrolytic 16V 220	1	
C2043		ECQM1H223KZW	Myler 50V 0.022	1	
C2044		ECQV05124KZ	Myler 50V 0.12	1	
C2045		ECQV05274KZ	Myler 50V 0.27	1	
C2046		ECQM1H333KZW	Myler 50V 0.033	1	
C2047		ECEA1HS010	Electrolytic 50V 1	1	
C2048		ECQM1H333KZW	Myler 50V 0.033	1	
C2049		ECQM1H103KZW	Myler 50V 0.01	1	
C2051		ECQV05224KZ	Myler 50V 0.22	1	
C2052		ECQM1H103KZW	Myler 50V 0.01	1	
C2053		ECEA50ZR1	Electrolytic 50V 0.1	1	
C2054		ECEA1CS100	Electrolytic 16V 10	1	
C2055		ECKD1H103KB	Ceramic 50V 0.01	1	
C2056,2057		ECEA1HS010	Electrolytic 50V 1	2	
C2058		ECEA1CS100	Electrolytic 16V 10	1	
C2059		ECQV05683JZ	Myler 50V 0.068	1	
C2060		ECQV05184JZ	Myler 50V 0.18	1	
C2061		ECQM1H683KZW	Myler 50V 0.068	1	
C2062		ECQM1H473KZW	Myler 50V 0.047	1	
C2063		ECSF35ER33	Tantalum 35V 0.33	1	
C2064,2065		ECQV05104KZ	Myler 50V 0.1	2	
C2066		ECEA1CS470	Electrolytic 16V 47	1	
C2068-2070		ECEA50N1	Electrolytic 50V 1	3	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C2071		ECEA1VS101	Electrolytic 35V 100	1	
C2072		ECEA50ZR33	Electrolytic 50V 0.33	1	
C2073,2074		ECQM1H103KZW	Myler 50V 0.01	2	
C2075		ECQV05104KZ	Myler 50V 0.1	1	
C2076,2077		ECEA50ZR33	Electrolytic 50V 0.33	2	
C2078		ECEA1CS470	Electrolytic 16V 47	1	
C2079		ECEA1HS010	Electrolytic 50V 1	1	
C2080		ECQV05104KZ	Myler 50V 0.1	1	
C2081		ECEA50Z2R2	Electrolytic 50V 2.2	1	
C2082		ECEA16Z47	Electrolytic 16V 47	1	
C2083		ECKD1H103KB	Ceramic 50V 0.01	1	
C2084,2085		ECEA16Z33	Electrolytic 16V 33	2	
C2086		ECEA1AS470	Electrolytic 10V 47	1	
C2087		ECEA0JS221	Electrolytic 6.3V 220	1	
			Coil		
L2001		VLQ80F102	1mH	1	
			Miscellaneous		
		EYP2AS129	Thermal Fuse	1	
		VJH23	Check Terminal	14	
		VJP1141	2P Connector	1	
		VJP1143	5P Connector	1	
		VJP1144	6P Connector	1	
		VJP1145	8P Connector	1	
		VJP1146	10P Connector	1	
		VJP1147	12P Connector	2	
		VMA3614	Fuse Holder	1	
		VSC0495	Heat Sink	2	
		XTV3+6BFN	Screw	10	
		XSN26+6	Screw	1	
		XWA26B	Washer	1	
		XWG26	Washer	1	
			AUDIO PRINTED CIRCUIT		
			BOARD		
			Integrated Circuits		
IC4001		HA12005		1	
IC4002		NE646B		1	
			Transistors		
Q4001,4002		2SD958		2	
Q4003		2SB788		1	
Q4004,4005		2SD636		2	
Q4006		2SD638		1	
Q4007,4008		2SD636		2	
Q4009		2SB641		1	
Q4010,4011		2SD636		2	
Q4012		2SB641		1	
Q4013-4015		2SD636		3	
Q4016		2SD638		1	
Q4017,4018		2SD639		2	
Q4019		2SA719		1	
Q4020		2SD973A		1	
Q4021		2SD636		1	
Q4022		2SB641		1	
Q4023,4024		2SD636		2	
			Diodes		
D4001-4009		MA165		9	
D4010		RD3.0EB		1	
D4011		MA165		1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		Resistors		
R4001	ERD25TJ392	1/4W 3.9K	1	
R4002	ERD25TJ104	1/4W 100K	1	
R4003	ERD25TJ181	1/4W 180	1	
R4004,4005	ERD25TJ682	1/4W 6.8K	2	
R4006	ERD10TJ103	10K	1	
R4007,4008	ERD10TJ332	3.3K	2	
R4009	ERD10TJ682	6.8K	1	
R4010	ERD10TJ823	82K	1	
R4011	ERD10TJ223	22K	1	
R4012	ERD10TJ821	820	1	
R4013	ERD25TJ104	1/4W 100K	1	
R4014	ERD25TJ333	1/4W 33K	1	
R4015	ERD25TJ154	1/4W 150K	1	
R4016	ERD25TJ331	1/4W 330	1	
R4017	ERD10TJ101	100	1	
R4018	ERD25TJ104	1/4W 100K	1	
R4019	ERD25TJ332	1/4W 3.3K	1	
R4020	ERD10TJ182	1.8K	1	
R4021	EVNK6A00B24	Variable 20K	1	
R4022	ERD10TJ222	2.2K	1	
R4023	ERD10TJ103	10K	1	
R4024	ERD10TJ223	22K	1	
R4025	ERD10TJ103	10K	1	
R4026-4028	ERD10TJ223	22K	3	
R4029	ERD10TJ104	100K	1	
R4030	ERD10TJ561	560	1	
R4031	ERD10TJ153	15K	1	
R4032	ERD10TJ183	18K	1	
R4033	ERD10TJ102	1K	1	
R4034,4035	ERD10TJ472	4.7K	2	
R4036	ERD10TJ824	820K	1	
R4037	ERD10TJ104	100K	1	
R4038	ERD10TJ102	1K	1	
R4039	ERD10TJ332	3.3K	1	
R4040	ERD10TJ473	47K	1	
R4041	ERD10TJ181	180	1	
R4042	ERD10TJ824	820K	1	
R4043	EVNK6A00B24	Variable 20K	1	
R4044	ERD10TJ274	270K	1	
R4045	ERD10TJ184	180K	1	
R4046,4047	ERD10TJ102	1K	2	
R4048,4049	ERD10TJ223	22K	2	
R4050	ERD25TJ392	1/4W 3.9K	1	
R4051	ERD25TJ821	1/4W 820	1	
R4052	ERD10TJ332	3.3K	1	
R4053	ERD10TJ123	12K	1	
R4054,4055	ERD10TJ223	22K	2	
R4056	ERD10TJ103	10K	1	
R4057	ERD10TJ153	15K	1	
R4058	ERD10TJ184	180K	1	
R4059	ERD10TJ823	82K	1	
R4060	ERD10TJ151	150	1	
R4061	ERD10TJ332	3.3K	1	
R4062	ERD10TJ470	47	1	
R4063	ERD10TJ103	10K	1	
R4064	ERD10TJ102	1K	1	
R4065	ERD10TJ333	33K	1	
R4066	ERD10TJ473	47K	1	
R4067	ERD10TJ153	15K	1	
R4068	ERD10TJ182	1.8K	1	
R4069,4070	ERD10TJ223	22K	2	
R4071	ERD10TJ103	10K	1	
R4072	ERD10TJ223	22K	1	
R4073	ERD10TJ472	4.7K	1	
R4074	ERD10TJ103	10K	1	
R4075	ERD10TJ223	22K	1	
R4076	ERD25TJ4R7	1/4W 4.7	1	
R4077	ERD10TJ333	33K	1	
R4078	ERD10TJ332	3.3K	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
R4079	ERD10TJ123	12K	1	
R4080	ERD25TJ4R7	1/4W 4.7	1	
R4081	ERD10TJ103	10K	1	
R4082	ERD10TJ563	56K	1	
R4083	ERD10TJ102	1K	1	
R4084	ERD10TJ104	100K	1	
R4085	ERD10TJ103	10K	1	
R4086-4087	ERD10TJ223	22K	2	
R4088	ERD10TJ472	4.7K	1	
R4089	ERD10TJ561	560	1	
R4090-4092	ERD10TJ103	10K	3	
R4093	ERD10TJ182	1.8K	1	
R4100	ERDLOTJ561	560	1	
		Capacitors		
C4001	ECKD1H102KB	Ceramic 50V 0.001	1	
C4002	ECEA1HS010	Electrolytic 50V 1	1	
C4003	ECKD1H102KB	Ceramic 50V 0.001	1	
C4004	ECEA1AS330	Electrolytic 10V 33	1	
C4005	ECKD1H102KB	Ceramic 50V 0.001	1	
C4006	ECEA1HS010	Electrolytic 50V 1	1	
C4007	ECEA1AS101	Electrolytic 10V 100	1	
C4008	ECEA1HS010	Electrolytic 50V 1	1	
C4009	ECEA1AS330	Electrolytic 10V 33	1	
C4010	ECKD1H102KB	Ceramic 50V 0.001	1	
C4011	ECEA1CS100	Electrolytic 16V 10	1	
C4012	ECKD1H681KB	Ceramic 50V 680P	1	
C4013	ECEA1CS100	Electrolytic 16V 10	1	
C4014	ECKD1H102KB	Ceramic 50V 0.001	1	
C4015	ECQM1H333JZ	Myler 50V 0.033	1	
C4016	ECEA1AS330	Electrolytic 10V 33	1	
C4017	ECQM1H333JZ	Myler 50V 0.033	1	
C4018	ECKD1H102KB	Ceramic 50V 0.001	1	
C4019	ECEA1CS100	Electrolytic 16V 10	1	
C4020	ECKD1H102KB	Ceramic 50V 0.001	1	
C4021,4022	ECEA1CS100	Electrolytic 16V 10	2	
C4023	ECQV05124KZ	Myler 50V 0.12	1	
C4024	ECEA1CS100	Electrolytic 16V 10	1	
C4025	ECQM1H273KZ	Myler 50V 0.027	1	
C4026	ECEA1CS100	Electrolytic 16V 10	1	
C4027	ECEA0JS101	Electrolytic 6.3V 100	1	
C4028	ECEA1HS010	Electrolytic 50V 1	1	
C4029	ECKD1H102KB	Ceramic 50V 0.001	1	
C4030	ECQM1H822JZ	Myler 50V 0.0082	1	
C4031	ECQM1H273JZ	Myler 50V 0.027	1	
C4032	ECQM1H472JZ	Myler 50V 0.0047	1	
C4033,4034	ECEA1CS100	Electrolytic 16V 10	2	
C4035	ECKD1H102KB	Ceramic 50V 0.001	1	
C4036	ECQM1H473JZ	Myler 50V 0.047	1	
C4037	ECEA1CS100	Electrolytic 16V 10	1	
C4038	ECQV05104KZ	Myler 50V 0.1	1	
C4039	ECQV05334KZ	Myler 50V 0.33	1	
C4040	ECQM1H562JZ	Myler 50V 0.0056	1	
C4041	ECKD1H102KB	Ceramic 50V 0.001	1	
C4042	ECEA1CS221	Electrolytic 16V 220	1	
C4043	ECEA1AS221	Electrolytic 10V 220	1	
C4044	ECEA1CS100	Electrolytic 16V 10	1	
C4045	ECEA1AS470	Electrolytic 10V 47	1	
C4046	ECQV05124KZ	Myler 50V 0.12	1	
C4047	ECEA50ZR68	Electrolytic 50V 0.68	1	
C4048	ECEA1ES3R3	Electrolytic 25V 3.3	1	
C4050,4051	ECQM1H472KZ	Myler 50V 0.0047	2	
C4052	ECQF6122KZ	Polyprophlene 630V 0.0012	1	
C4053	ECEA0JS101	Electrolytic 6.3V 100	1	
C4054	ECEA1ES3R3	Electrolytic 25V 3.3	1	
C4055	ECKD1H103KB	Ceramic 50V 0.01	1	
C4056	ECQM1H333KZ	Myler 50V 0.033	1	
C4057	ECQF6152KZ	Polypropylene 630V 0.0015	1	
C4058	VCV0001	Trimmer	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C4059		ECEA1ES3R3	Electrolytic 25V 3.3	1	
C4060		ECEA1CS470	Electrolytic 16V 47	1	
C4061,4062		ECEA1CS100	Electrolytic 16V 10	2	
C4063		ECEA1CS221	Electrolytic 16V 220	1	
C4064		ECEA1CS101	Electrolytic 16V 100	1	
C4067		ECEA50N1	Electrolytic 50V 1	1	
C4068		ECEA0JS470	Electrolytic 6.3V 47	1	
C4069		ECEA0JS470	Electrolytic 6.3V 47	1	
			Coils		
L4001		VLQ00F222K	2.2µH	1	
L4002		VLQ80W102K	1mH	1	
			Transformers		
T4001		VLT0090A		1	
T4002		VLT0116		1	
			Filters		
FL4001		VLF0116		1	
			Connectors		
P4001		VJP1141	2P	1	
P4002		VJP1144	6P	1	
P4003		VJP1142	3P	1	
P4004		VJP1144	6P	1	
P4005-4007		VJP1141	2P	3	
P4008		VJP1142	3P	1	
P4009		VJP1143	5P	1	
			TRANSPORT CONTROL (1)		
			PRINTED CIRCUIT BOARD		
			Integrated Circuits		
IC6001		MN1400VP		1	
IC6002		µPD4081		1	
IC6003		µPD4049		1	
IC6004,6005		µPD4503		2	
IC6006		µPD4078		1	
IC6007		µPD4025		1	
IC6008		µPD4011		1	
IC6009		µPD4012		1	
IC6010		µPD4011		1	
IC6012		µPC177C		1	
			Transistors		
Q6001-6004		2SD636		4	
Q6005		2SB819		1	
Q6006		2SD1051		1	
Q6007		2SB819		1	
Q6008		2SD1051		1	
Q6009,6010		2SD636		2	
Q6017		2SD636		1	
Q6018		2SB641		1	
Q6019-6026		2SD636		8	
Q6028-6031		2SD636		4	
Q6101-6105		2SD636		5	
Q6106		2SB641		1	
Q6107,6108		2SD636		2	
Q6109		2SB641		1	
Q6110,6111		2SD636		2	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			Diodes		
D6001-6007		MA165		7	
D6008		0A90		1	
D6010,6011		MA165		2	
D6014-6020		MA165		7	
D6022-6028		MA165		7	
D6030-6046		MA165		17	
D6050		MA165		1	
D6051-6053		0A90		3	
D6054-6060		MA165		7	
D6061		MA26T0		1	
D6062-6064		MA165		3	
D6066,6067		MA165		2	
D6101,6102		MA165		2	
D6109-6133		MA165		25	
D6135-6138		MA165		4	
			Resistors		
R6001		ERD10TJ473	47K	1	
R6002,6003		ERD10TJ333	33K	2	
R6004,6005		ERD10TJ563	56K	2	
R6006-6009		ERD10TJ103	10K	4	
R6010		ERD10TJ562	5.6K	1	
R6011		ERD10TJ102	1K	1	
R6012		ERD10TJ223	22K	1	
R6013,6014		ERD10TJ103	10K	2	
R6015,6016		ERD10TJ102	1K	2	
R6017,6018		ERD25TJ471	1/4W 470	2	
R6019,6020		ERD10TJ223	22K	2	
R6021,6022		ERD10TJ102	1K	2	
R6023-6026		ERD10TJ223	22K	4	
R6037		ERD10TJ473	47K	1	
R6038-6041		ERD10TJ332	3.3K	4	
R6042,6043		ERD10TJ101	100	2	
R6044,6045		ERD10TJ223	22K	2	
R6046		ERD10TJ104	100K	1	
R6047-6049		ERD10TJ222	2.2K	3	
R6050		ERD10TJ223	22K	1	
R6051		ERD10TJ563	56K	1	
R6052,6053		ERD10TJ223	22K	2	
R6054		ERD10TJ562	5.6K	1	
R6055,6056		ERD10TJ563	56K	2	
R6057		ERD10TJ104	100K	1	
R6058		ERD10TJ224	220K	1	
R6059,6060		ERD10TJ223	22K	2	
R6061		ERD10TJ103	10K	1	
R6062		ERD10TJ473	47K	1	
R6063		ERD10TJ333	33K	1	
R6064		ERD10TJ394	390K	1	
R6065,6066		ERD10TJ104	100K	2	
R6067		ERD10TJ563	56K	1	
R6068		ERD10TJ104	100K	1	
R6069		ERD10TJ563	56K	1	
R6070,6071		ERD10TJ154	150K	2	
R6072		ERD10TJ103	10K	1	
R6073		ERD10TJ394	390K	1	
R6074		ERD10TJ103	10K	1	
R6075		ERD10TJ394	390K	1	
R6082		ERD10TJ103	10K	1	
R6088		ERD10TJ224	220K	1	
R6089		ERD10TJ104	100K	1	
R6090		ERD10TJ223	22K	1	
R6091-6093		ERD10TJ103	10K	3	
R6094		ERD10TJ394	390K	1	
R6095		ERD10TJ223	22K	1	
R6096		ERD10TJ104	100K	1	
R6097		ERD10TJ151	150	1	
R6098		ERD10TJ224	220K	1	
R6099,6100		ERD10TJ394	390K	2	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R6101		ERD10TJ223	22K	1	
R6102		ERD10TJ151	150	1	
R6103		ERD10TJ274	270K	1	
R6104		ERD10TJ224	220K	1	
R6105,6106		ERD10TJ333	33K	2	
R6107		ERD10TJ394	390K	1	
R6109		ERD10TJ103	10K	1	
R6110		ERD10TJ394	390K	1	
R6111		ERD10TJ563	56K	1	
R6112		ERD10TJ683	68K	1	
R6113		ERD10TJ103	10K	1	
R6114		ERD10TJ683	68K	1	
R6115		ERD10TJ473	47K	1	
R6116		ERD10TJ683	68K	1	
R6117		ERD10TJ102	1K	1	
R6118,6119		ERD10TJ104	100K	2	
R6120,6121		ERD10TJ103	10K	2	
R6122,6123		ERD10TJ563	56K	2	
R6124		ERD10TJ682	6.8K	1	
R6125,6126		ERD10TJ103	10K	2	
R6127,6128		ERD10TJ124	120K	2	
R6130,6131		ERD10TJ103	10K	2	
R6134		ERD10TJ184	180K	1	
R6135		ERD10TJ124	120K	1	
R6137		ERD10TJ103	10K	1	
R6138		ERG1ANJ620	1W 62	1	
R6139		ERD10TJ103	10K	1	
R6142		ERD10TJ103	10K	1	
R6143,6144		ERD10TJ333	33K	2	
R6145		ERD10TJ563	56K	1	
R6146		ERD10TJ104	100K	1	
R6147		ERD10TJ184	180K	1	
R6148		ERD10TJ224	220K	1	
R6149,6150		ERD10TJ103	10K	2	
R6151		ERD10TJ104	100K	1	
R6152		ERD10TJ824	820K	1	
R6153		ERD10TJ684	680K	1	
R6154,6155		ERD10TJ272	2.7K	2	
R6161-6163		ERD10TJ683	68K	3	
R6164		ERD10TJ222	2.2K	1	
R6165		ERD10TJ104	100K	1	
R6166-6168		ERD10TJ224	220K	3	
R6169-6171		ERD10TJ683	68K	3	
R6172		ERD10TJ224	220K	1	
R6173		ERD10TJ223	22K	1	
R6174		ERD10TJ103	10K	1	
R6175		ERD10TJ183	18K	1	
R6176,6177		ERD10TJ273	27K	2	
R6178		ERD10TJ393	39K	1	
R6179,6180		ERD10TJ104	100K	2	
R6181,6182		ERD10TJ562	5.6K	2	
R6183		ERD10TJ103	10K	1	
R6184		ERD10TJ821	820	1	
R6185		ERD10TJ102	1K	1	
R6186		ERD10TJ103	10K	1	
R6187-6189		ERD10TJ104	100K	3	
R6190		ERD10TJ224	220K	1	
R6191,6192		ERD10TJ154	150K	2	
R6193		ERD10TJ683	68K	1	
R6194,6195		ERD10TJ272	2.7K	2	
R6196		ERD10TJ224	220K	1	
R6197		ERD10TJ563	56K	1	
R6198,6199		ERD10TJ104	100K	2	
R6381,6382		ERD10TJ104	100K	2	
R6383		ERD10TJ683	68K	1	
R6384		ERD10TJ104	100K	1	
R6385,6386		ERD10TJ223	22K	2	
RX6001		EXBP810223K		1	
RX6002		EXBP88223K		1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			Capacitors		
C6001		ECEA1CS100	Electrolytic 16V 10	1	
C6002		ECEA1AS330	Electrolytic 10V 33	1	
C6003		ECKW1H103PF	Ceramic 50V 0.01	1	
C6004		ECEA1HS010	Electrolytic 50V 1	1	
C6005		ECKW1H103PF	Ceramic 50V 0.01	1	
C6006		ECEA1HS010	Electrolytic 50V 1	1	
C6007		ECEA16Z10	Electrolytic 16V 10	1	
C6011		ECCW1H121JC	Ceramic 50V 120P	1	
C6012		ECKW1H103PF	Ceramic 50V 0.01	1	
C6013		ECEA0JS470	Electrolytic 6.3V 47	1	
C6014,6015		ECEA25Z4R7	Electrolytic 25V 4.7	2	
C6016,6017		ECKW1H103PF	Ceramic 50V 0.01	2	
C6023		ECEA50Z1	Electrolytic 50V 1	1	
C6024,6025		ECKW1H103PF	Ceramic 50V 0.01	2	
C6026		ECEA50Z3R3	Electrolytic 50V 3.3	1	
C6027		ECEA0JS221	Electrolytic 6.3V 220	1	
C6028		ECEA1ES4R7	Electrolytic 25V 4.7	1	
C6029		ECEA1AS101	Electrolytic 10V 100	1	
C6030		ECEA10Z47	Electrolytic 10V 47	1	
C6031		ECEA10Z22	Electrolytic 10V 22	1	
C6032		ECEA1HS2R2	Electrolytic 50V 2.2	1	
C6033,6034		ECEA50ZR1	Electrolytic 50V 0.1	2	
C6037		ECEA50Z1	Electrolytic 50V 1	1	
C6038		ECEA1ES4R7	Electrolytic 25V 4.7	1	
C6040		ECEA1CS100	Electrolytic 16V 10	1	
C6041,6042		ECEA1HS010	Electrolytic 50V 1	2	
C6102		ECEA50ZR1	Electrolytic 50V 0.1	1	
C6103		ECEA25Z2R2	Electrolytic 25V 2.2	1	
C6104,6105		ECEA1CS100	Electrolytic 16V 10	2	
			Connectors		
P6001		VJP1145	8P	1	
P6002		VJP1141	2P	1	
P6004		VJP1142	3P	1	
P6005		VJP1141	2P	1	
P6006		VJP1146	10P	1	
P6007		VJP1146	10P	1	
P6008		VJP1147	12P	1	
P6009		VJP1143	5P	1	
P6010,6011		VJP1141	2P	2	
P6012		VJP1147	12P	1	
P6013		VJP1143	5P	1	
P6014		VJP1141	2P	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			TRANSPORT CONTROL (2)		
			PRINTED CIRCUIT BOARD		
			Integrated Circuit		
IC6201		AN6552		1	
			Diodes		
D6201-6211		MA165		12	
D6214-6218		MA165		5	
D6221		MA165		1	
D6223		MA165		1	
D6224		MA165		1	
D6225		MA165		1	
D6227-6229		10E1		3	
D6230		MA165		1	
D6234,6235		MA165		2	
D6236-6238		10E1		3	
D6239		MA165		1	
D6245		MA165		1	
D6247		MA165		1	
D6249-6252		MA165		4	
D6258		ERZC14DK330		1	
D6260		10E1		1	
D6261,6262		MA165		2	
D6264-6269		MA165		6	
			Transistors		
Q6201		2SD636		1	
Q6203-6206		2SD636		4	
Q6207		2SB819		1	
Q6208		2SD636		1	
Q6209		2SB819		1	
Q6210		2SD636		1	
Q6211		2SB819		1	
Q6212		2SD636		1	
Q6214,6215		2SD636		2	
Q6216		2SB643		1	
Q6217		2SD636		1	
Q6218		2SB641		1	
Q6219		2SD636		1	
Q6220		2SB641		1	
Q6221-6223		2SD636		3	
Q6225		2SD636		1	
Q6228		2SB641		1	
Q6229		2SB819		1	
Q6230		2SD636		1	
Q6231		2SB641		1	
Q6232		2SD837A		1	
Q6233		2SB641		1	
Q6234		2SD837A		1	
Q6235		2SB641		1	
Q6236		2SD837A		1	
Q6237		2SB644		1	
Q6238		2SD866BD	Power Transistor	1	
Q6239-6243		2SD636		5	
Q6245,6246		2SD636		2	
Q6247		2SD636		1	
Q6248		2SB819		1	
Q6249		2SD1051		1	
Q6250		2SB819		1	
Q6251		2SD1051		1	
Q6252,6253		2SD636		2	
			Capacitors		
C6201		ECEA16Z10	Electrolytic 16V 10	1	
C6205		ECQM1H223KZW	Myler 50V 0.022	1	
C6206		ECEA1CS100	Electrolytic 16V 10	1	
C6207		ECEA50Z1	Electrolytic 50V 1	1	
C6208-6210		ECEA1ES470	Electrolytic 25V 47	3	
C6215		ECEA1HS010	Electrolytic 50V 10	1	
C6217		ECEA0JS471	Electrolytic 6.3V 470	1	
C6221		ECEA1HS010	Electrolytic 50V 1	1	
C6222		ECEA50ZR68	Electrolytic 50V 0.68	1	
C6223		ECEA1HS010	Electrolytic 50V 1	1	
C6224,6225		ECKW1H103PF	Ceramic 50V 0.01	2	
C6226		ECEA1HS010	Electrolytic 50V 1	1	
C6227		ECEA50Z3R3	Electrolytic 50V 3.3	1	
			Resistors		
R6201		ERD10TJ563	56K	1	
R6202		ERD10TJ104	100K	1	
R6203		ERD10TJ822	8.2K	1	
R6204		ERD10TJ334	330K	1	
R6208		ERD10TJ103	10K	1	
R6209,6210		ERD10TJ333	33K	2	
R6211		ERD10TJ152	1.5K	1	
R6212-6214		ERD10TJ224	220K	3	
R6215		ERD10TJ103	10K	1	
R6216		ERD10TJ394	390K	1	
R6217,6218		ERD10TJ223	22K	2	
R6219		ERD10TJ103	10K	1	
R6220		ERD10TJ152	1.5K	1	
R6221,6222		ERD10TJ103	10K	2	
R6223,6224		ERD10TJ103	10K	2	
R6225		ERD10TJ152	1.5K	1	
R6226-6228		ERD10TJ223	22K	3	
R6229		ERD10TJ563	56K	1	
R6230		ERD10TJ152	1.5K	1	
R6233		ERD10TJ563	56K	1	
R6235		ERD10TJ104	100K	1	
R6236,6237		ERD10TJ563	56K	2	
R6242,6243		ERD10TJ224	220K	2	
R6244		ERD10TJ103	10K	1	
R6245,6246		ERD10TJ224	220K	2	
R6247		ERD10TJ104	100K	1	
R6248		ERD10TJ103	10K	1	
R6252,6253		ERD10TJ184	180K	2	
R6254		ERD10TJ394	390K	1	
R6255-6257		ERD10TJ333	33K	3	
R6258		ERD10TJ222	2.2K	1	
R6259-6261		ERD10TJ333	33K	3	
R6263		ERD10TJ333	33K	1	
R6264		ERD10TJ103	10K	1	
R6265		ERD10TJ122	1.2K	1	
R6266		ERD10TJ273	27K	1	
R6267		ERD10TJ332	3.3K	1	
R6268		ERD10TJ333	33K	1	
R6269		ERD10TJ563	56K	1	
R6270		ERD10TJ821	820	1	
R6271,6272		ERD10TJ563	56K	2	
R6273		ERD10TJ562	5.6K	1	
R6274,6275		ERD10TJ104	100K	2	
R6276		ERD10TJ562	5.6K	1	
R6277		ERD10TJ272	2.7K	1	
R6289		ERD10TJ333	33K	1	
R6290,6291		ERD10TJ684	680K	2	
R6292		ERD10TJ222	2.2K	1	
R6293		ERX1ANJR82H	1W 0.82	1	
R6294		ERD10TJ103	10K	1	
R6295		ERG2ANJP120	2W 12	1	
R6296		ERD10TJ102	1K	1	
R6297		ERD10TJ223	22K	1	
R6298		ERD10TJ473	47K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R6299,6300		ERD10TJ104	100K	2	
R6301,6302		ERD10TJ333	33K	2	
R6303		ERD10TJ122	1.2K	1	
R6304		ERD10TJ103	10K	1	
R6305		ERD10TJ272	2.7K	1	
R6306,6307		ERD10TJ333	33K	2	
R6308		ERD10TJ122	1.2K	1	
R6309		ERD10TJ103	10K	1	
R6310		ERD10TJ272	2.7K	1	
R6311,6312		ERD10TJ333	33K	2	
R6313		ERD10TJ122	1.2K	1	
R6314		ERD10TJ103	10K	1	
R6315		ERD10TJ272	2.7K	1	
R6316		ERD10TJ561	560	1	
R6318		ERD10TJ103	10K	1	
R6319		ERD10TJ471	470	1	
R6320		ERD10TJ152	1.5K	1	
R6323		ERD10TJ680	68	1	
R6324		ERD10TJ393	39K	1	
R6325		ERD10TJ223	22K	1	
R6326		ERD10TJ154	150	1	
R6327		ERD10TJ223	22K	1	
R6328		ERD10TJ273	27K	1	
R6329		ERD10TJ473	47K	1	
R6330		ERD10TJ472	4.7K	1	
R6331		ERD10TJ224	220K	1	
R6332		ERD10TJ273	27K	1	
R6333,6334		ERD10TJ224	220K	2	
R6335		ERD10TJ103	10K	1	
R6340		ERD10TJ393	39K	1	
R6341		ERD10TJ273	27K	1	
R6342		ERD10TJ183	18K	1	
R6343		ERD10TJ332	3.3K	1	
R6346		ERD10TJ561	560	1	
R6347,6348		ERD10TJ104	100K	2	
R6349		ERD10TJ472	4.7K	1	
R6350,6351		ERD10TJ104	100K	2	
R6352		ERD10TJ272	2.7K	1	
R6353		ERD10TJ103	10K	1	
R6354		ERD10TJ223	22K	1	
R6355,6356		ERD10TJ102	1K	2	
R6357,6358		ERD50TJ471	1/2W 470	2	
R6359,6360		ERD10TJ102	1K	2	
R6361		ERD10TJ223	22K	1	
R6362		ERD10TJ103	10K	1	
R6363		ERD10TJ334	330K	1	
R6364		ERD10TJ224	220K	1	
			Connectors		
P6201		VJP1141	2P	1	
P6202		VJP1147	12P	1	
P6203		VJP1143	5P	1	
P6204		VJP1141	2P	1	
P6205		VJP1143	5P	1	
P6206		VJP1144	6P	1	
P6207		VJP1145	8P	1	
P6208		VJP1143	5P	1	
P6209		VJP1141	2P	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		SUB TRANSPORT CONTROL		
		SECTION (INCLUDING SERVO		
		CONTROL SECTION)		
		Integrated Circuits		
IC6401	μPD4081		1	
IC6402	μPD4013		1	
IC6403	μPD4049		1	
IC6404	μPD4013		1	
		Diodes		
D6401-6406	MA165		6	
D6409,6410	MA165		2	
D6413	MA165		1	
		Resistors		
R6401	ERD10TJ473	47K	1	
R6402	ERD10TJ333	33K	1	
R6403,6404	ERD10TJ394	390K	2	
R6405-6407	ERD10TJ104	100K	3	
		Capacitors		
C6401	ECKW1H152PF	Ceramic 50V 0.0015	1	
		Connectors		
P6401	VJP1144	8P	1	
P6402,6403	VJP1141	2P	2	
P6404	VJP1145	5P	1	
P6405	VJP1143	3P	1	
		STILL PRINTED CIRCUIT		
		BOARD		
		Integrated Circuits		
IC6701,6702	μPD4011		2	
IC6703	μPD4081		1	
IC6704	μPD4071		1	
IC6705	μPD4011		1	
IC6706,6707	μPD4013		2	
		Transistors		
Q6701-6703	2SB641		3	
Q6704-6708	2SD636		5	
Q6709	2SB641		1	
Q6710	2SD636		1	
		Diodes		
D6701-6720	MA165		20	
		Resistors		
R6701	ERD10TJ472	4.7K	1	
R6702	ERD10TJ153	15K	1	
R6703	ERD10TJ223	22K	1	
R6704	ERD10TJ563	56K	1	
R6705,6706	ERD10TJ334	330K	2	
R6707	ERD10TJ103	10K	1	
R6708	ERD10TJ153	15K	1	
R6709	ERD10TJ103	10K	1	
R6711	ERD10TJ563	56K	1	
R6712	ERD10TJ103	10K	1	
R6713,6714	ERD10TJ104	100K	2	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R6715,6716		EVNK6AA00B25	Variable 200K	2	
R6717		ERD10TJ224	220K	1	
R6718		EVNK6AA00B25	Variable 200K	1	
R6719		ERD10TJ104	100K	1	
R6720		ERD10TJ393	39K	1	
R6721		ERD10TJ104	100K	1	
R6722		ERD10TJ223	22K	1	
R6723		ERD10TJ224	220K	1	
R6724		ERD10TJ104	100K	1	
R6725		ERD10TJ823	82K	1	
R6726		ERD10TJ102	1K	1	
R6727		ERD10TJ223	22K	1	
R6728		ERD10TJ224	220K	1	
R6729		ERD10TJ562	5.6K	1	
R6730-6732		ERD10TJ104	100K	3	
R6733		ERD10TJ103	10K	1	
R6734		ERD10TJ563	56K	1	
R6735		EVNK6AA00B15	Variable 100K	1	
R6736		ERD10TJ223	22K	1	
R6737		ERD10TJ103	10K	1	
R6738		ERD10TJ683	68K	1	
R6739		ERD10TJ104	100K	1	
R6740		ERD10TJ563	56K	1	
R6741		ERD10TJ564	560K	1	
R6742,6743		ERD10TJ104	100K	2	
R6744-6748		EVNK6AA00B15	Variable 100K	5	
R6749		ERD10TJ105	1M	1	
R6750		ERD10TJ103	10K	1	
R6751		ERD10TJ683	68K	1	
R6752-6757		ERD10TJ103	10K	6	
			Coil		
L6701		VLQ80F221K	Peaking 220μH	1	
			Capacitors		
C6701,6702		ECEA1CS100	Electrolytic 16V 10	2	
C6703		ECQM1H103KZW	Myler 50V 0.01	1	
C6704		ECQM1H102KZW	Myler 50V 0.001	1	
C6705		ECEA1CS470	Electrolytic 16V 47	1	
C6706		ECQV05104KZW	Myler 50V 0.1	1	
C6707		ECQM1H472KZW	Myler 50V 0.0047	1	
C6708		ECQM1H102KZW	Myler 50V 0.001	1	
C6709		ECQV05224KZW	Myler 50V 0.22	1	
C6710		ECEA50Z3R3	Electrolytic 50V 3.3	1	
C6711		ECEA25Z4R7	Electrolytic 25V 4.7	1	
C6712		ECEA1CS100	Electrolytic 16V 10	1	
C6713		ECQM1H332KZW	Myler 50V 0.0033	1	
C6714		ECQM1H102KZW	Myler 50V 0.001	1	
C6715,6716		ECQM1H103KZW	Myler 50V 0.01	2	
C6717		ECEA1HS2R2	Electrolytic 50V 2.2	1	
			Connectors		
P6701		VJP1146	10P	1	
P6702		VJP1145	8P	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			OPERATION PRINTED CIRCUIT BOARD		
			Integrated Circuit		
IC6501		HD7416		1	
			Transistor		
Q6501		2SD636		1	
			Diodes		
D6501-6508		MA165		8	
D6510-6514		MA165		5	
D6517		LN41YCPHL	L.E.D. (Yellow)	1	
D6518		LN31GCPHL	L.E.D. (Green)	1	
D6519		LN07832P		1	
			Resistors		
R6501		ERD10TJ332	3.3K	1	
R6502,6503		ERD10TJ683	68K	2	
R6504-6506		ERD25TJ122	1/4W 1.2K	3	
R6507		ERD10TJ333	33K	1	
R6509		ERD25TJ122	1/4W 1.2K	1	
R6510		ERD10TJ682	6.8K	1	
			Switches		
S6501-6508		EVQPXR04X	Key Switch	8	
S6510,6511		EVQPXR04X	Key Switch	2	
			Connectors		
P6501,6502		VJP1146	10P	2	
P6503		VJP1143	5P	1	
P6504		VJP1144	6P	1	
P6505		VJP1143	5P	1	
P6507		VJP1145	8P	1	
P6508		VJP1142	3P	1	
			MOTOR POWER TRANSISTOR PRINTED CIRCUIT BOARD		
			Transistors		
Q1504		2SD836		1	
Q1505		2SD762		1	
			Resistors		
R1507		ERD10TJ821	820	1	
R1508		ERD10TJ272	2.7K	1	
			Connectors		
P1515,1516		VJP1142	3P	2	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		DEMODULATOR PRINTED		
		CIRCUIT BOARD		
		Resistors		
R701	ERD10TJ821	820	1	
R702	ERD10TJ151	150	1	NV-7000-E
R703	ERD10TJ102	1K	1	NV-7000-E
R703	ERD10TJ222	2.2K	1	NV-7000-B
R704	ERD10TJ563	56K	1	
R705	ERD10TJ102	1K	1	
R706	EVNK6AA00B23	Variable 2K	1	
R707,708	ERD10TJ102	1K	2	
R709	ERD10TJ272	2.7K	1	NV-7000-E
R709	ERD10TJ222	2.2K	1	NV-7000-B
R710	ERD10TJ101	100	1	
R711	ERD10TJ152	1.5K	1	
R712	ERD10TJ153	15K	1	
R713	ERD10TJ821	820	1	
R714	ERD10TJ333	33K	1	
R716	ERD25TJ225	1/4W 220K	1	
R717	ERD10TJ102	1K	1	
R718	EVNK6AA00B53	Variable 5K	1	NV-7000-B
R718	EVNK6AA00B14	Variable 10K	1	NV-7000-E
R719	ERD10TJ562	5.6K	1	
R720	ERD10TJ183	18K	1	
R721	ERD10TJ680	68	1	NV-7000-E
R721	ERD10TJ221	220	1	NV-7000-B
R722	ERD10TJ181	180	1	
R724	ERD10TJ470	47	1	
R725,726	ERD10TJ103	10K	2	
R728	ERD10TJ222	2.2K	1	NV-7000-E
R730	ERQ12HJ220	Fuse 22	1	
R731	EVNK6AA00B24	Variable 20K	1	
R732	ERD10TJ822	8.2K	1	
R733	ERD10TJ222	2.2K	1	
R734	ERD10TJ333	33K	1	NV-7000-E
R735	ERD10TJ332	3.3K	1	
R736	ERD10TJ391	390	1	
R737	ERD10TJ683	68K	1	
R738	ERD10TJ682	6.8K	1	
R741	EVNK6AA00B24	20K	1	NV-7000-E
R745	ERD10TJ472	4.7K	1	
R746	ERD10TJ101	100	1	
R748	ERD10TJ221	220	1	
R750	ERD10TJ103	10K	1	NV-7000-B
R7013	ERD10TJ182	1.8K	1	
R7015	ERD10TJ103	10K	1	
R7017	ERD10TJ183	18K	1	NV-7000-E
R7018	ERD25FJ271	1/4W 270	1	
R7019	ERD50TJ682	1/2W 6.8K	1	
R7020	ERG2ANJ331	Metal 2W 330	1	NV-7000-E
R7021	ERD10TJ393	39K	1	NV-7000-E
R7022	ERD10TJ104	100K	1	NV-7000-E
R7023	ERD10TJ473	47K	1	NV-7000-E
R7024,7025	ERD10TJ103	10K	1	NV-7000-E
R7026	ERD25FJ101	1/4W 100	1	NV-7000-E
R7026	ERD25FJ151	1/4W 150	1	NV-7000-B
R7027	ERD10TG1102	±2% 1.1K	1	NV-7000-E
R7028	ERD10TJ103	10K	1	NV-7000-E
R7029	ERD10TJ104	100K	1	NV-7000-E
R7030	ERD10TJ273	27K	1	NV-7000-E
R7052	ERD10TJ122	1.2K	1	
R7057	ERD10TJ224	220K	1	NV-7000-E
R7058	ERD10TJ333	33K	1	NV-7000-E
R7059	ERD10TJ683	68K	1	NV-7000-E
R7060	ERD10TJ270	27	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		Capacitors		
C704-709	ECKW1H103ZF	Ceramic 50V 0.01	6	
C710	ECCW1H020CC	Ceramic 50V 2P	1	
C711	ECCW1H680JR	Ceramic 50V 68P	1	NV-7000-E
C711	ECCW1H820JR	Ceramic 50V 82P	1	NV-7000-B
C712	ECCW1H220JC	Ceramic 50V 22P	1	
C713	ECCW1H020CC	Ceramic 50V 2P	1	
C714	ECCW1H560KP	Ceramic 50V 56P	1	
C715	ECEA1HS010	Electrolytic 50V 1	1	
C716	ECEA1ES3R3	Electrolytic 25V 3.3	1	
C717	ECKW1H103ZF	Ceramic 50V 0.01	1	
C718	ECQM1H823KZW	Myler 50V 0.082	1	
C719	ECEA1CS100	Electrolytic 16V 10	1	
C720	ECKW1H102KB	Ceramic 50V 0.001	1	
C721	ECEA50ZR33	Electrolytic 50V 0.33	1	
C722	ECEA1HS2R2	Electrolytic 50V 2.2	1	
C723	ECSZ25EF1	Tantalum 25V 1	1	
C724	ECKW1H103ZF	Ceramic 50V 0.01	1	
C725	ECEA1CS100	Electrolytic 16V 10	1	
C726	ECEA25N3R3	Electrolytic 25V 3.3	1	
C727	ECCW1H050DC	Ceramic 50V 5P	1	
C728	ECCW1H820JR	Ceramic 50V 82P	1	
C729	ECQM1H473KZW	Myler 50V 0.047	1	
C730	ECEA1CS100	Electrolytic 16V 10	1	
C731	ECCW1H270JC	Ceramic 50V 27P	1	NV-7000-B
C732	ECEA1AS102	Electrolytic 10V 1000	1	
C733	ECEA16N4R7	Electrolytic 16V 4.7	1	
C734	ECKW1H103ZF	Ceramic 50V 0.01	1	
C735	ECQM1H153KZW	Myler 50V 0.015	1	
C736	ECEA1CS471	Electrolytic 16V 470	1	
C737	ECCW1H560JC	Ceramic 50V 56P	1	NV-7000-E
C737	ECCW1H470JC	Ceramic 50V 47P	1	NV-7000-B
C738	ECKW1H103ZF	Ceramic 50V 0.01	1	
C739	ECEA1CS100	Electrolytic 16V 10	1	
C740	ECEA50N1	Electrolytic 50V 1	1	
IC7001	AN5701		1	
IC7002	AN5703		1	NV-7000-E
		Coils		
L701	ELQSR82KB		1	
L703	VLQ80W270K	27μH	1	
L704	VLQ80W680K	68μH	1	
L705	VLQ80W560K	56μH	1	NV-7000-E
L705	VLQ80W560K	56μH	1	NV-7000-B
L706	VLQ80W390J	39μH	1	
L707	VLQ80W220J	22μH	1	NV-7000-E
L707	VLQ80W180J	18μH	1	NV-7000-B
L708	VLQ80W150K	15μH	1	
L710	VLQ80W220K	22μH	1	
L711	VLQ80W181K	180μH	1	
		Transformers		
T701	EULHLB473		1	NV-7000-E
T701	EULHLB471		1	NV-7000-B
T702	EIM5A721		1	
T703	EIV10E309A		1	
T704	EIV10E309B		1	
T705	EIS10E312A		1	
		Filters		
FL701	EFCS5R5MS3		1	NV-7000-E
FL701	EFCS6R0MS3		1	NV-7000-B
FL702	EFCS5R5MW3		1	NV-7000-E
FL702	EFCS6R0MW3		1	NV-7000-B
FL703	EFCA5R5MC3C		1	NV-7000-E
FL703	EFCA6R0MC3A		1	NV-7000-B

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C752,753		ECCW1H220KC	Ceramic 50V 22P	2	
C755		ECKW1H561KB	Ceramic 50V 560P	1	
C756		ECKW1H151KC	Ceramic 50V 150P	1	
C757		ECCW1H150JC	Ceramic 50V 15P	1	
C758		ECCW1H820JR	Ceramic 50V 82P	1	NV-7000-E
C7003		ECKW1H222ZF	Ceramic 50V 0.0022	1	
C7004		ECEA1HS4R7	Electrolytic 50V 4.7	1	NV-7000-E
C7005		ECKW1H103ZF	Ceramic 50V 0.01	1	
C7006		ECEA1HS010	Electrolytic 50V 1	1	
C7015		ECEA0JS470	Electrolytic 6.3V 47	1	NV-7000-E
			Diodes		
D701-703		MA150		3	NV-7000-B .. only D701
D7010		MA150		1	
D7011		RD5.1EB	Zener	1	
D7012		MA161		1	
D7013		µPC574JK		1	
D7024		MA165		1	NV-7000-E
D7025,7026		MA150		2	
			Transistors		
Q701-703		2SC945A		3	
Q704		2SC564A		1	
Q7007		2SA684		1	
Q7008		2SC1826		1	NV-7000-E
Q7009-7011		2SC945A		3	NV-7000-E
Q7018		2SC945A		1	NV-7000-E
Q7019		2SA684		1	
			ICs		
IC701		BN5111B		1	
IC702		AN240P		1	
			Connectors		
P701		VJJ0020	RCA Jack	1	
P702		VJP1144	6P	1	
P704		VJP1143	5P	1	
P705		VJP1143	5P	1	NV-7000-E
P705		VJP1142	3P	1	NV-7000-B
P706		VJP1142	3P	1	
P707		VJP1144	6P	1	
P709		VJP1145	8P	1	
P710		VJP1142	3P	1	
P713		VJP1141	2P	1	
			Shield Cases		
		VSC0478		1	
		VSC0479		1	
		VSC0480		1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			TUNER PRINTED CIRCUIT BOARD		
			Tuners		
		TNV77701F2		1	NV-7000-E
		ENV87509F2		1	NV-7000-B
			Capacitors		
C701		ECEA1ES4R7	Electrolytic 25V 4.7	1	NV-7000-B
C702		ECKW1H222ZF	Ceramic 50V 0.0022	1	
C703		ECKW1H103ZF	Ceramic 50V 0.01	1	NV-7000-B
C743		ECEA1HSR47	Electrolytic 50V 0.47	1	
C744		ECKW1H103ZF	Ceramic 50V 0.01	1	NV-7000-E
C745		ECEA1ES4R7	Electrolytic 25V 4.7	1	NV-7000-E
C746-749		ECKW1H103ZF	Ceramic 50V 0.01	4	NV-7000-E
C747		ECKW1H103ZF	Ceramic 50V 0.01	1	NV-7000-B
C750		ECEA1ES220	Electrolytic 25V 22	1	
			Coil		
L709		VLQ80W221K	220µH	1	NV-7000-B
			SELECTOR PRINTED CIRCUIT BOARD		
			L.E.D.s		
D7201-7206		LN31GPHL		6	
D7208-7213		LN31GPHL		6	
			Resistors		
R7201-7206		ERD10TJ221	220	6	
R7208-7213		ERD10TJ221	220	6	
			Switches		
SW7201-7206		EVQQ8R13K		6	
SW7208-7213		EVQQ8R13K		6	
			SELECTOR SWITCH PRINTED CIRCUIT BOARD		
			Diodes		
D7301-7306		MC161		6	
D7308-7313		MC161		6	
			Resistors		
R7301-7306		EWEU2A016B24	Variable 20K	6	
R7308-7313		EWEU2A016B24	Variable 20K	6	
R7315		ERD10TJ122	1.2K	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		Switches		
SW7301-7306	VSS0050		6	NV-7000-E
SW7308-7313	VSS0050		6	NV-7000-E
SW7315	ESE153		1	
		TIMER INDICATION SECTION PRINTED CIRCUIT BOARD		
		Resistors		
R7501	ERD10TJ332	3.3K	1	
R7502	ERD10TJ103	10K	1	
R7503	ERD10TJ272	2.7K	1	
R7504-7507	ERD10TJ273	27K	4	
R7509	ERD10TJ273	27K	1	
R7511	ERD10TJ273	27K	1	
R7513	ERD10TJ273	27K	1	
R7515	ERD10TJ273	27K	1	
R7517	ERD10TJ273	27K	1	
R7519	ERD10TJ273	27K	1	
R7521	ERD10TJ273	27K	1	
R7523	ERD10TJ273	27K	1	
R7525	ERD10TJ273	27K	1	
R7527	ERD10TJ273	27K	1	
R7529	ERD10TJ273	27K	1	
R7531	ERD10TJ273	27K	1	
R7533	ERD10TJ273	27K	1	
R7535	ERD10TJ273	27K	1	
R7537	ERD10TJ273	27K	1	
R7540,7541	ERD10TJ123	12K	2	
R7545	ERD10TJ222	2.2K	1	
R7546	ERD10TJ681	680	1	
R7567	ERD10TJ472	4.7K	1	
R7568	ERD10TJ103	10K	1	
R7569	ERD10TJ273	27K	1	
R7570	ERD10TJ181	180	1	
R7571	ERD10TJ102	1K	1	
R7572	ERD10TJ332	3.3K	1	
R7573	ERD10TJ123	12K	1	
R7574	EVNK6AA00B53	Variable 5K	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
R7575,7576	ERD10TJ562	5.6K	2	
R7577	ERD10TJ331	330	1	
R7578	ERD10TJ102	1K	1	
R7579	ERD10TJ472	4.7K	1	
R7581,7582	ERD10TJ561	560	2	
R7601-7604	ERD10TJ393	39K	4	
R7607-7609	ERD10TJ393	39K	3	
R7610	ERD10TJ123	12K	1	
R7611	ERD10TJ103	10K	1	
R7612	ERD10TJ123	12K	1	
R7613-7616	ERD10TJ102	1K	4	
R7617	ERD10TJ123	12K	1	
R7618	ERD10TJ223	22K	1	
R7620	ERD10TJ333	33K	1	
R7621	ERD10TJ223	22K	1	
R7622	ERD10TJ331	330	1	
R7623,7624	ERD10TJ102	1K	2	
R7625	ERD10TJ222	2.2K	1	
R7626	ERD10TJ102	1K	1	
R7627-7629	ERD10TJ472	4.7K	3	
R7631	ERD10TJ123	12K	1	
R7633	ERD10TJ223	22K	1	
R7635	ERD10TJ102	1K	1	
R7636	ERD10TJ4R7	4.7	1	
R7638	ERD10TJ5R6	5.6	1	
R7639	ERD50TJ391	1/2W 390	1	
R7640	ERD10TJ104	100K	1	
R7641	ERD10TJ332	3.3K	1	
R7642	ERD10TJ221	220	1	
R7643	ERD10TJ101	100	1	
R7644,7645	ERD10TJ104	100K	2	
		Capacitors		
C7501	ECEA0JS101	Electrolytic 6.3V 100	1	
C7502	ECEA1HS010	Electrolytic 25V 1	1	
C7503	ECKW1H103PF	Ceramic 50V 0.01	1	
C7504	ECCW1H150JC	Ceramic 50V 15P	1	
C7505	ECV1ZW20X32N	Trimmer 20P	1	
C7510	ECEA1AS221	Electrolytic 10V 220	1	
C7511	ECKW1H103PF	Ceramic 50V 0.01	1	
C7512	ECEA1AS221	Electrolytic 10V 220	1	
C7513	ECEA1CS220	Electrolytic 16V 22	1	
C7514	ECEA1CS100	Electrolytic 16V 10	1	
C7515	ECKW1H471KB	Ceramic 50V 470P	1	
C7516	ECEA0JS101	Electrolytic 6.3V 100	1	
C7521	ECCW1H050CC	Ceramic 50V 5P	1	
C7601	ECEA1HS010	Electrolytic 25V 1	1	
C7602	ECKW1H103PF	Ceramic 50V 0.01	1	
C7603	ECEA1AS101	Electrolytic 10V 100	1	
C7604	ECCW1H470J	Ceramic 50V 47P	1	
C7605	ECKW1H102	Ceramic 50V 0.001	1	
C7606	ECEA1CS220	Electrolytic 16V 22	1	
		Diodes		
D7517	MA150		1	
D7518	MA165		1	
D7519	MA150		1	
D7535	MA150		1	
D7536	EM1Z		1	
D7537	MA150		1	
D7538	MA522		1	
D7540	RD5.1JB	Zener	1	
D7541	RD8.2JB	Zener	1	
D7542	QA107R	Zener	1	
D7543	EM1Z		1	
D7544	RD15EB	Zener	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
D7545		RD30EB	Zener	1	
D7546		RD10EB	Zener	1	
D7601-7608		MA161		8	
D7611-7614		MA161		4	
D7615		MA165		1	
D7616-7623		MA150		8	
D7624		MA26W0		1	
D7626		MA150		1	
D7627,7628		MA165		2	
			Transistors		
Q7501-7503		2SA1023		3	
Q7519		2SB641		1	
Q7530,7531		2SD636		2	
Q7532		2SD638		1	
Q7533		2SC1384		1	
Q7534		2SD636		1	
Q7601-7604		2SD636		4	
Q7605		2SD638		1	
Q7606		2SD636		1	
Q7608		2SB641		1	
Q7609		2SD636		1	
			ICs		
IC7501-7504		DN852		4	
IC7505		MN1400VL		1	
IC7506		MN1405VM		1	
IC7507		MN1206A		1	
IC7601-7603		TA57		3	
			Complex Components(R)		
RX7601		EXBP85103K		1	
RX7602		EXBP88103K		1	
RX7603-7605		EXBP85273K		3	
RX7606		EXBP812473K		1	
RX7607		EXBP85473K		1	
RX7608		EXBP88103K		1	
			Crystal		
X7501		VSX0071		1	
			Coil		
L7501		VLQ80W101K	100μH	1	
			Transformer		
T7501		VTP0043		1	
			Fuse		
F7601		XBA2C10TR0	1A	1	
			Connectors		
P7501		VJP1143	5P	1	
P7502,7503		VJP1142	3P	2	
P7504		VJP1143	5P	1	
P7505		VJP1145	8P	1	
P7506		VJP1144	6P	1	
P7507		VJP1145	8P	1	
P7508		TEL312		2	
P7509		VJP1146	10P	1	
P7510		VJP1142	3P	1	
P709		VJP1145	8P	1	
P7603		VJS1142	3P	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			Miscellaneous		
DP7501		VSL0003	Timer Indicator	1	
		VFA0017	Battery	1	
		VJS0039	Fuse Holder	2	
			TIMER OPERATION SECTION		
			PRINTED CIRCUIT BAORD		
			Switches		
SW7501		ESD14123		1	
SW7502-7510		EVQPXR04K		8	
SW7511		ESD14125		1	
			Diode		
D7529		MA150		1	
			Miscellaneous		
		VGT0163	Bracket for Switch	1	
		VGQ0162	Supporter for Timer	1	
			ANTENNA TERMINAL BOARD		
		ENPE702		1	
			TRANSISTOR INTERMEDIATE		
			P.C. BOARD		
			Transistors		
Q1504		2SD836		1	
Q1505		2SD762		1	
			Resistors		
R1507		ERD10TJ821	820	1	
R1508		ERD10TJ272	2.7K	1	
			Capacitor		
C1501		ECEA1HS010	Electrolytic 50V 1	1	
			Connectors		
P1515,1516		VJP1142	3P	2	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			RF Converter		
			Resistors		
R2,3		ERD10TJ101	100	2	
R4,5		ERD10TJ331	330	2	
R9		ERD10TJ220	22	1	
R10,11		ERD10TJ101	100	2	
R12		ERD10TJ331	330	1	
R13		ERD10TJ220	22	1	
R14		ERD10TJ331	330	1	
R15		ERD10TJ391	390	1	
R16		ERD10TJ181	180	1	
R17		ERD10TJ471	470	1	
R18		ERD25TJ270	27	1	
R19		ERD25TJ103	10K	1	
			Variable Resistors		
VR1		EVN38CA00B13	1K	1	
VR2		9PNXB13	1K	1	
VR3		9PNXB15	100K	1	
VR4		EVNV0U08KB15	100K	1	
			Capacitors		
C1		ECCD1H020CC	Ceramic 50V 2P	1	
C2,3		ECCD1H050CC	Ceramic 50V 5P	2	
C4		ECCD1H050C1	Ceramic 50V 5P	1	
C5		ECEA10N330	Electrolytic 10V 33	1	
C6		VCY25473M1	Semiconductor 47n	1	
C7		ECEA1AS330	Electrolytic 10V 33	1	
C8		ECEA1AS220	Electrolytic 10V 22	1	
C9		VCY25473M1	Semiconductor 47n	1	
C10		ECEA1AS470	Electrolytic 10V 47	1	
C11		ECKD1H102PF	Ceramic 50V 0.001	1	
C12		ECCD1H0R5CC	Ceramic 50V 0.5P	1	
C13		ECCD1HR75CC	Ceramic 50V 0.75P	1	
C14,15		ECCD1H050C	Ceramic 50V 5P	2	
C16		ECCD1H151K	Ceramic 50V 150P	1	
C17		ECCD1H101K	Ceramic 50V 100P	1	
C18		ECCD1H680K	Ceramic 50V 68P	1	
C19		ECKD1H103PF	Ceramic 50V 0.01	1	
C20		VCY25473M1	Semiconductor 47n	1	
C21		ECEA1AS100	Electrolytic 10V 10	1	
C22		ECKD1H102PF	Ceramic 50V 0.001	1	
C23		ECCD1H271K	Ceramic 50V 270P	1	
C24		ECCD1H390KC	Ceramic 50V 39P	1	
C25		ECCD1H330KT	Ceramic 50V 33	1	
C26		ECEA1HS010	Electrolytic 50V 1	1	
C27		ECCD1H681K	Ceramic 50V 680P	1	
C28		ECEA1AS470	Electrolytic 10V 47	1	
C29		ECCD1H330K	Ceramic 50V 33	1	
C30,31		ECKD1H102PF	Ceramic 50V 0.001	2	
C32		VCY25473M1	Semiconductor 47n	1	
C33		ECCD1H0R5CC	Ceramic 50V 0.5P	1	
VC1,2		ECV1ZW04X53N	Trimmer	2	
			Coils		
L1		LB162609VU02		1	
L2		LR3H100K	Peaking 10µH	1	
L3-5		LB162609VU02		3	
			Transformers		
T1,2		VLT0093		2	
T3,4		BRNA010V		2	
			Diodes		
D1-4		1SS86		4	
D5		RD56EB	Zener	1	
D6		MA26W		1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
AM-1		PCBA016V	Audio Modulator	1	
VM-1		PCBA025V	Video Modulator	1	
UO-1		UOCA009V	UHF Oscillator	1	

ORDER NO. VRD-8008-428

Service Manual

Supplementary

Video Cassette Recorder

Panasonic VHS

NV-7000-EG

SPECIFICATIONS

Power Source: NV-7000-EG 110, 120, 220, 240V AC 50/60Hz
Power Consumption: Approx. 52 watts
Television System: CCIR: 625 lines, 50 fields
PAL colour signal
Video Recording System: 2 rotary heads, helical scanning system
Luminance: FM azimuth recording
Colour signal: converted subcarrier phase shift recording
Audio Track: 1 track
Tape Format: Tape width 12.7mm high density tape
Tape Speed: 23.39mm/s
Record/Playback Time: 180 min. with NV-E180
FF/REW Time: Less than 4.5 min. with NV-E180
Heads: Video: 2 rotary heads
Audio/Control: 1 stationary head
Erase: 1 full track erase
Input Level: Video: VIDEO IN connector (BNC)
1.0Vp-p, 75Ω unbalanced
Audio: MIC IN jack
−70dB, 600Ω unbalanced
LINE IN jack
−20dB, 100kΩ unbalanced
Output Level: Video: VIDEO OUT connector (BNC)
1.0Vp-p, 75Ω unbalanced
Audio: LINE OUT jack
−6dB, 600Ω unbalanced
RF Modulated: UHF channel 36 (±4)
75Ω unbalanced
Weight: 12.7kg
Dimensions: 480(W) × 136(H) × 356(D) mm
Accessories Supplied: 1 pc. Video cassette tape, NV-E120
1 pc. DIN-DIN coaxial cable, VJA0130
1 pc. Dust cover, VFB0008
1 pc. Remote control unit, VSQ0117, Approx. 5m
Optional Accessories: Video cassette tape:
NV-E180 Approx. 258m, 180 min.
NV-E120 Approx. 174m, 120 min.
NV-E60 Approx. 88m, 60 min.
Video camera, WV-3300E
Wireless remote controller, NV-A700
Microphone

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

This service manual contains only the differences from the original service manual Model NV-7000E.
Therefore please file this manual with the manual Model NV-7000E.

The NV-7000EG offers full-coverage video performance, thanks to PAL/SECAM operation (PAL: recording/playback, *SECAM: provisional recording/playback).

* REMARKS

This set can be used for provisional recording/playback of SECAM colour signal.

SECAM tapes which have been recorded on specified SECAM-VHS recorder can be played back in Black and White on this set.

CONTENTS

SPECIFICATIONS .... **Cover**
INTRODUCTION **1**
ELECTRICAL ADJUSTMENT PROCEDURE **2**
SYSTEM CONTROL BLOCK DIAGRAM **2**
SYSTEM CONTROL CIRCUIT **3**
SERVO & SECAM COLOUR CIRCUIT **5**
LUMINANCE & CHROMINANCE CIRCUIT **7**
INTERCONNECTION SCHEMATIC DIAGRAM **10**
ELECTRIC REPLACEMENT PARTS LIST **12**

SYSTEM CONTROL CIRCUIT BOARD (VEP06112A)

P6005

1	
2	
3	LOADING END & REC ADUBⓁ
4	A-DUB Ⓗ
5	EXCEPT REC 12V
6	REC 12V
7	EE/VV SEL
8	REC PLAY 12V

P6020

1	REC +12V
2	REC +15V
3.4	GND
5	UNREG + 12V
6	UNREG + 20V

P6015

1	PB/DUB Ⓗ
2	CH LOCK

P6011

1	+ 12V
2	+ 5V
3	PLAY
4	REC
5	A-DUB
6	REW
7	FF
8	EJECT
9	
10	PAUSE

P6206

1	FF REW SOL A
2	B
3	C
4	PLAY SOL A
5	B
6	C

P6013

1	PINCH SOL A
2	B
3	C

P6017

1	NEGA PULSE
2	CAP POSI/NEGA
3	CUEⓁ
4	REVⓁ
5	CYLINDAR ON
6	CAPⓂON

P6001

1	A0
2	A1
3	A2
4	A3
5	C0
6	C1
7	C2
8	C3

P6014

1	LAMP
2	LAMP

P6010

1	CASSETTE IN
2	CASSETTE IN + 12V

P6009

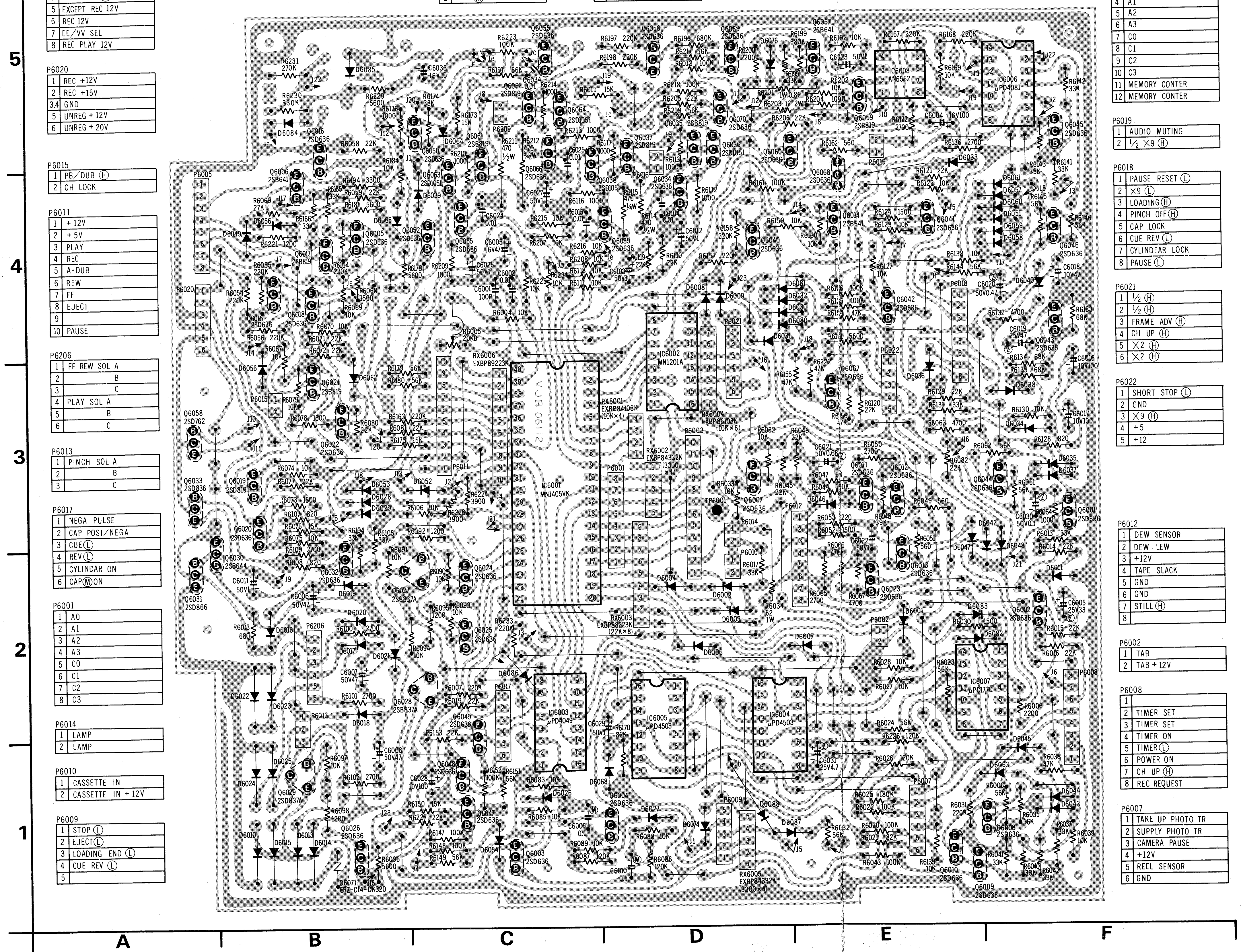
1	STOP Ⓛ
2	EJECTⓁ
3	LOADING END Ⓛ
4	CUE REV Ⓛ
5	

P6209

1	REEL Ⓜ
2	REEL Ⓜ

P6016

1	LOADING Ⓜ
2	LOADING Ⓜ



P6003

1	GND
2	LAMP OUT
3	A0
4	A1
5	A2
6	A3
7	C0
8	C1
9	C2
10	C3
11	MEMORY CONTER
12	MEMORY CONTER

P6019

1	AUDIO MUTING
2	½ ×9 Ⓗ

P6018

1	PAUSE RESET Ⓛ
2	×9 Ⓛ
3	LOADINGⒽ
4	PINCH OFFⒽ
5	CAP LOCK
6	CUE REV Ⓛ
7	CYLINDEAR LOCK
8	PAUSE Ⓛ

P6021

1	½ Ⓗ
2	½ Ⓗ
3	FRAME ADV Ⓗ
4	CH UP Ⓗ
5	×2 Ⓗ
6	×2 Ⓗ

P6022

1	SHORT STOP Ⓛ
2	GND
3	×9 Ⓗ
4	+5
5	+12

P6012

1	DEW SENSOR
2	DEW LEW
3	+12V
4	TAPE SLACK
5	GND
6	GND
7	STILLⒽ
8	

P6002

1	TAB
2	TAB + 12V

P6008

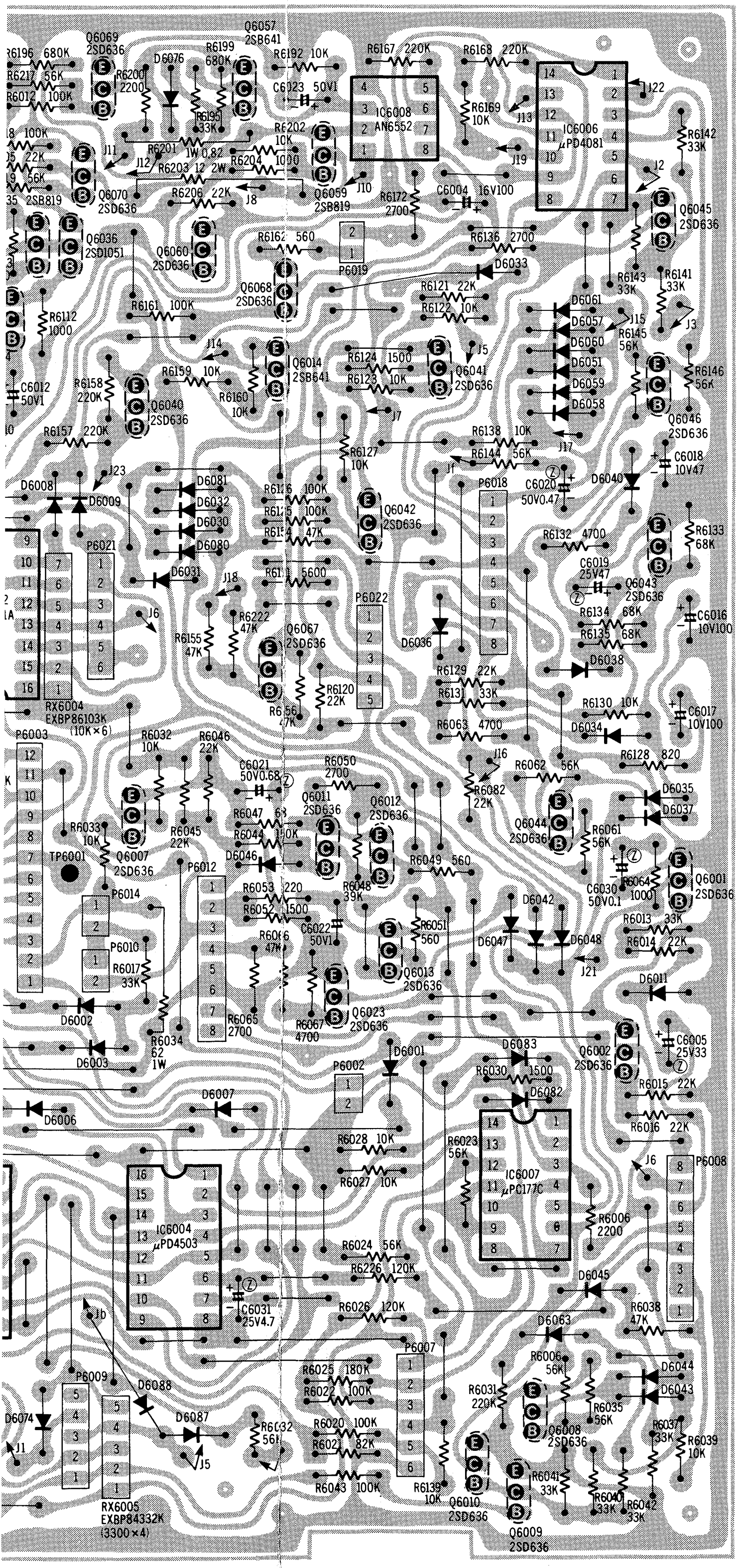
1	
2	TIMER SET
3	TIMER SET
4	TIMER ON
5	TIMERⓁ
6	POWER ON
7	CH UP Ⓗ
8	REC REQUEST

P6007

1	TAKE UP PHOTO TR
2	SUPPLY PHOTO TR
3	CAMERA PAUSE
4	+12V
5	REEL SENSOR
6	GND

SYSTEM CONTROL TRANSISTORs D.C. VOLTAGE CHART

REF. NO.	Q6001			Q6002			Q6003			Q6004			Q6005			Q6006	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C
STOP	0	5.04	0	0	0.03	0.7	0	2.57	−0.38	0	2.6	−0.39	−0.01	11.84	0.09	11.92	−0.01
REC	0	5.05	0	0	0.03	0.7	0	2.56	−0.37	0	2.59	−0.38	0	11.83	0.09	11.91	−0.03
PLAY	0	5.04	0	0	0.03	0.7	0	2.56	−0.38	0	2.59	−0.39	0	11.82	0.1	11.9	−0.02
CUE	0	4.98	0	0	0.03	0.7	0	2.55	−0.38	0	2.59	−0.39	−0.02	11.81	0.08	11.89	−0.04
REV	−0.01	5.03	−0.01	0	0.02	0.69	0	2.56	−0.37	0	2.59	−0.38	0	11.81	0.1	11.89	−0.04
REW	0	4.99	0	0	0.03	0.7	0	2.56	−0.38	0	2.59	−0.39	0	11.83	0.1	11.9	−0.03
F.F	0	4.99	0	0	0.03	0.7	0	2.56	−0.38	0	2.59	−0.39	−0.02	11.82	0.09	11.9	−0.03
REF. NO.	Q6008			Q6009			Q6010			Q6011			Q6012			Q601	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C
STOP	0	0∼0.1	0.05	0	0.08	−0.03	0	13.19	0.08	0.66	1.35	0.42	0.66	0.77	1.35	0.22	11.83
REC	0	0.1	0.04	0	0	0.58	0	13.15	0	0.65	1.34	0.41	0.65	0.77	1.34	0.21	11.83
PLAY	0	0.08	0.05	0	0	0.59	0	13.16	0	0.66	1.35	0.42	0.66	0.77	1.35	0.22	11.82
CUE	0	0.12	0.48	0	13.14	0	−0.01	0	0.58	0.65	1.33	0.41	0.65	0.76	1.34	0.21	11.81
REV	0	0.08	0.04	0	0	0.58	0	13.15	0	0.65	1.33	0.41	0.65	0.76	1.34	0.21	11.81
REW	0	0∼0.1	0.42	0	0.01	−0.04	0	13.17	0.01	0.65	1.34	0.41	0.65	0.76	1.34	0.21	11.82
F.F	0	0∼0.1	0.47	0	0	−0.04	0	13.16	0	0.65	1.34	0.41	0.65	0.76	1.34	0.21	11.82
REF. NO.	Q6015			Q6016			Q6017			Q6018			Q6019			Q602	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C
STOP	−0.01	0.05	0.62	−0.02	11.89	−0.01	11.92	11.81	11.17	−0.01	0.07	0.69	11.92	0	11.9	−0.03	11.9
REC	0	0.05	0.63	−0.02	0	0.62	11.91	0.04	11.9	−0.01	11.89	0.2	11.91	11.89	11.21	−0.03	0.05
PLAY	0	11.59	0.15	−0.02	11.87	0	11.89	11.79	11.16	0	0.08	0.7	11.91	−0.01	11.9	−0.02	11.89
CUE	−0.02	11.58	0.14	−0.03	11.86	−0.01	11.88	11.77	11.14	−0.02	0.06	0.68	11.88	−0.03	11.85	−0.03	11.87
REV	0	11.58	0.17	−0.03	11.86	−0.01	11.89	11.78	11.15	0	0.08	0.7	11.89	−0.02	11.88	−0.03	11.88
REW	0	0.06	0.63	−0.02	11.87	0	11.9	11.79	11.16	0	0.07	0.69	11.89	−0.02	11.88	−0.04	11.88
F.F	−0.02	0.04	0.61	−0.02	11.87	0	11.9	11.79	11.15	−0.02	0.07	0.68	11.89	−0.02	11.88	−0.04	11.88
REF. NO.	Q6022			Q6023			Q6024			Q6025			Q6026			Q602	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C
STOP	−0.01	11.9	0.1	0.01	0.2	0.03	−0.03	5.14	0.13	−0.04	5.14	0.12	−0.03	5.14	0.2	−0.03	20.1
REC	0	0.09	0.68	0	0.01	0.61	−0.02	5.13	−0.12	4.4	5.13	5.05	3.8	5.12	4.43	−0.02	18.4
PLAY	0	11.9	0.1	0.01	0.02	0.62	−0.02	5.13	0.12	4.4	5.12	5.04	3.6	5.13	4.23	−0.02	18.8
CUE	−0.02	11.85	0.08	0	0.01	0.62	4.39	5.11	5.04	−0.03	5.11	0.1	3.59	5.11	4.22	−0.03	0.6
REV	0	11.88	0.1	0	0.01	0.61	4.39	5.12	5.05	−0.03	5.12	0.12	3.59	5.11	4.22	−0.03	0.6
REW	0	11.88	0.1	0	0.18	0.02	4.4	5.13	5.03	−0.03	5.12	0.12	−0.03	5.12	−0.03	−0.03	0.6
F.F	−0.02	11.88	0.09	0	0.18	0.02	4.4	5.13	5.05	−0.03	5.12	0.11	−0.03	5.12	0.18	−0.03	0.6
REF. NO.	Q6029			Q6030			Q6031			Q6032			Q6033			Q603	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C
STOP	−0.03	20.03	−0.03	20.08	0.12	19.97	0.16	18.98	0.12	−0.03	9.14	0.31	8.72	10.4	9.13	−0.01	8.74
REC	−0.02	0.66	1.32	17.6	0.8	17.6	0.07	17.6	0.4	−0.03	9.12	0.32	8.74	10.6	9.12	−0.02	8.73
PLAY	−0.01	0.68	1.33	18.92	0	17.6	0.12	17.6	−0.5	−0.02	9.13	0.32	8.71	10.4	9.12	−0.01	8.73
CUE	−0.02	0.67	1.33	18.8	0	17.6	0.12	17.6	−0.5	−0.03	9.1	0.33	8.68	10.2	9.1	−0.02	8.69
REV	−0.02	0.67	1.33	17.6	0	17.6	0.12	17.6	−0.5	−0.03	9.12	0.31	8.73	10.2	9.12	−0.02	8.72
REW	−0.03	19.78	−0.03	19.37	0	19.25	0.08	17.98	0.02	−0.03	9.11	0.31	8.70	11.24	9.1	−0.01	8.7
F.F	−0.03	19.8	−0.03	19.68	0	19.22	0.08	17.98	0.02	−0.03	9.12	0.31	8.7	11.3	9.1	−0.02	8.7
REF. NO.	Q6036			Q6037			Q6038			Q6039			Q6040			Q604	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C
STOP	−0.01	0	−0.01	8.73	0	8.74	−0.01	0	−0.01	−0.01	8.72	−0.01	−0.01	0.09	0.62	−0.01	0.1
REC	−0.02	0.02	−0.02	8.72	0	8.7	−0.02	0	−0.02	−0.02	8.71	0.06	−0.02	11.88	0.67	−0.02	11.7
PLAY	−0.01	0	−0.01	8.72	0	8.73	−0.01	0.07	−0.01	−0.01	8.71	0.06	0.01	11.87	0.02	−0.01	11.7
CUE	−0.01	0	−0.02	8.7	0	8.7	−0.01	0	−0.01	−0.01	8.7	0.05	−0.02	11.86	0.01	−0.03	11.7
REV	−0.02	0.03	−0.01	8.71	0	8.71	−0.02	0.02	−0.02	−0.02	8.72	0.06	−0.01	11.86	0.02	−0.02	11.7
REW	−0.02	0	−0.01	8.71	0	8.71	−0.02	0	−0.02	−0.02	8.71	0.06	−0.02	0.08	0.62	−0.02	0.1
F.F	−0.01	0	−0.02	8.71	0	8.71	−0.02	0	−0.02	−0.01	8.71	0.05	−0.02	0.08	0.61	−0.02	0.1
REF. NO.	Q6043			Q6044			Q6045			Q6046			Q6047			Q60	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C
STOP	0	0.02	0.59	0	4.21	0.1	0	10.61	0.04	0	9.25	−0.04	−0.03	3.79	0.06	−0.04	0.0
REC	−0.01	0.03	0.57	0	0.04	0.63	−0.01	10.6	0.03	−0.01	9.89	−0.01	−0.02	0.02	0.58	−0.02	11.8
PLAY	0	0.07	0.57	0	0.05	0.64	0	10.6	0.04	−0.01	9.24	0	−0.02	−0.03	0.58	−0.02	11.8
CUE	0	0.07	0.57	0	0.05	0.64	0	0.09	0.67	0	9.21	0	−0.03	0.02	0.58	−0.02	11.7
REV	−0.01	0.06	0.57	−0.01	0.04	0.63	−0.01	0.06	0.67	−0.01	9.23	−0.01	−0.04	0.03	0.58	−0.02	11.7
REW	0	0.02	0.59	0	4.2	0.1	0	10.59	0.04	0	9.23	0	−0.03	0.06	0.64	−0.03	0.0
F.F	0	0.02	0.59	0	4.2	0.09	0	10.59	0.04	0	9.23	0	−0.03	3.78	0.06	−0.03	0.0
REF. NO.	Q6050			Q6051			Q6052			Q6055			Q6056			Q60	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C
STOP	−0.01	6.7	0.04	−0.01	6.69	0.13	−0.01	9.34	−0.01	−0.01	0.06	0.62	−0.01	−0.01	0.57	1.6	1.4
REC	−0.02	0.08	0.64	0	2.45	0.12	0	9.45	0	−0.02	2.45	−0.01	−0.02	−0.01	0.56	3	3
PLAY	−0.01	0.09	0.65	0	2.45	0.14	0	9.45	0	−0.01	2.45	−0.01	−0.01	−0.01	0.57	6.2	3.2
CUE	0	6.29	0.19	−0.02	6.29	0.12	−0.02	0.09	0.65	0	6.29	−0.01	−0.02	5.69	0.03	6.4	6.2
REV	−0.02	6.3	0.18	0	6.30	0.13	0	0.10	0.67	−0.02	6.3	−0.02	−0.02	5.68	0.04	6.2	6.2
REW	−0.02	7.53	0.03	0	0.07	0.63	0	9.45	0	−0.02	7.53	−0.01	−0.02	−0.01	0.57	9	8.2
F.F	−0.01	7.52	0.03	0.02	0.06	0.62	−0.02	9.45	−0.01	−0.01	7.52	−0.01	−0.02	−0.01	0.57	9	8.2
REF. NO.	Q6059			Q6060			Q6061			Q6062			Q6063			Q60	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C
STOP	1.87	1.87	1.86	−0.01	1.86	0.09	1.87	−0.02	1.99	1.8	0.8	1.87	0.01	0	−0.01	−0.01	0.8
REC	3.0	3.0	2.5	−0.02	0.01	0.67	1	0.08	1	3.0	3.0	1	0	0.08	0.71	−0.02	3
PLAY	3.2	3.1	2.5	−0.01	0.02	0.68	3.1	0.09	3.1	3.0	2.9	3.1	0	0.09	0.72	−0.01	3
CUE	6.29	3.64	6.29	−0.02	6.29	0.03	3.72	3.58	2.97	3.65	0.13	3.72	−0.02	3.58	−0.02	−0.01	0.
REV	6.31	3.81	6.3	−0.01	6.3	0.04	3.76	0.14	3.76	3.74	3.6	3.76	0.01	0.14	0.74	−0.02	3.5
REW	8.33	8.24	7.58	−0.01	0.04	0.7	8.28	0.03	8.30	8.22	8.2	8.28	0	0.03	0.74	−0.02	8.
F.F	8.39	8.20	7.53	−0.02	0.04	0.69	8.13	8.09	7.46	8.19	0.02	8.13	−0.02	8.18	−0.02	−0.01	0.0
REF. NO.	Q6066			Q6067			Q6068			Q6069			Q6070				
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B		
STOP	−0.01	2.04	0.04	−0.01	5.13	0.27	−0.03	5.14	0.66	−0.01	0.06	0.58	−0.01	0.09	0.59		
REC	−0.02	3	0.03	−0.02	5.12	0	−0.05	5.12	0.01	−0.02	3.15	−0.02	−0.02	0.67	−0.02		
PLAY	−0.01	3	0.04	−0.01	5.12	0.01	−0.03	5.13	0.08	−0.01	3.15	0.01	−0.01	0.68	−0.01		
CUE	0.73	0.84	1.42	−0.03	0.69	0	4.19	5.11	4.77	−0.02	6.27	0	−0.01	0.03	−0.01		
REV	−0.02	3.66	0.04	−0.02	0.7	0	4.22	5.11	4.78	−0.02	6.28	−0.02	−0.02	0.05	−0.01		
REW	−0.02	8.25	0.03	−0.02	5.12	0.27	−0.03	5.12	0.02	−0.02	8.3	−0.01	−0.02	0.7	−0.01		
F.F	0.73	1	1.44	−0.02	5.12	0.27	−0.03	5.12	0.01	−0.02	8.27	−0.01	−0.02	0.69	−0.01		



P6003

1	GND
2	LAMP OUT
3	A0
4	A1
5	A2
6	A3
7	C0
8	C1
9	C2
10	C3
11	MEMORY CONTER
12	MEMORY CONTER

P6019

1	AUDIO MUTING
2	½ ×9 Ⓗ

P6018

1	PAUSE RESET Ⓛ
2	×9 Ⓛ
3	LOADING Ⓗ
4	PINCH OFF Ⓗ
5	CAP LOCK
6	CUE REV Ⓛ
7	CYLINDEAR LOCK
8	PAUSE Ⓛ

P6021

1	½ Ⓗ
2	½ Ⓗ
3	FRAME ADV Ⓗ
4	CH UP Ⓗ
5	×2 Ⓗ
6	×2 Ⓗ

P6022

1	SHORT STOP Ⓛ
2	GND
3	×9 Ⓗ
4	+5
5	+12

P6012

1	DEW SENSOR
2	DEW LEW
3	+12V
4	TAPE SLACK
5	GND
6	GND
7	STILL Ⓗ
8	

P6002

1	TAB
2	TAB + 12V

P6008

1	
2	TIMER SET
3	TIMER SET
4	TIMER ON
5	TIMER Ⓛ
6	POWER ON
7	CH UP Ⓗ
8	REC REQUEST

P6007

1	TAKE UP PHOTO TR
2	SUPPLY PHOTO TR
3	CAMERA PAUSE
4	+12V
5	REEL SENSOR
6	GND

SYSTEM CONTROL TRANSISTORs D.C. VOLTAGE CHART

REF. NO.	Q6001			Q6002			Q6003			Q6004			Q6005			Q6006			Q6007		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	5.04	0	0	0.03	0.7	0	2.57	−0.38	0	2.6	−0.39	−0.01	11.84	0.09	11.92	−0.01	11.87	0	0.02	0.69
REC	0	5.05	0	0	0.03	0.7	0	2.56	−0.37	0	2.59	−0.38	0	11.83	0.09	11.91	−0.03	11.86	0	0.01	0.68
PLAY	0	5.04	0	0	0.03	0.7	0	2.56	−0.38	0	2.59	−0.39	0	11.82	0.1	11.9	−0.02	11.86	0	0.02	0.69
CUE	0	4.98	0	0	0.03	0.7	0	2.55	−0.38	0	2.59	−0.39	−0.02	11.81	0.08	11.89	−0.04	11.83	0	0.01	0.68
REV	−0.01	5.03	−0.01	0	0.02	0.69	0	2.56	−0.37	0	2.59	−0.38	0	11.81	0.1	11.89	−0.04	11.85	0	0.01	0.68
REW	0	4.99	0	0	0.03	0.7	0	2.56	−0.38	0	2.59	−0.39	0	11.83	0.1	11.9	−0.03	11.86	0	0.01	0.68
F.F	0	4.99	0	0	0.03	0.7	0	2.56	−0.38	0	2.59	−0.39	−0.02	11.82	0.09	11.9	−0.03	11.87	0	0.01	0.68

REF. NO.	Q6008			Q6009			Q6010			Q6011			Q6012			Q6013			Q6014		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0∼0.1	0.05	0	0.08	−0.03	0	13.19	0.08	0.66	1.35	0.42	0.66	0.77	1.35	0.22	11.83	0.77	11.89	0.4∼0.8	11.16
REC	0	0.1	0.04	0	0	0.58	0	13.15	0	0.65	1.34	0.41	0.65	0.77	1.34	0.21	11.83	0.77	11.9	0.4	11.89
PLAY	0	0.08	0.05	0	0	0.59	0	13.16	0	0.66	1.35	0.42	0.66	0.77	1.35	0.22	11.82	0.77	11.91	0.42	11.17
CUE	0	0.12	0.48	0	13.14	0	−0.01	0	0.58	0.65	1.33	0.41	0.65	0.76	1.34	0.21	11.81	0.76	11.86	0.13	11.85
REV	0	0.08	0.04	0	0	0.58	0	13.15	0	0.65	1.33	0.41	0.65	0.76	1.34	0.21	11.81	0.76	11.89	0.42	11.88
REW	0	0∼0.1	0.42	0	0.01	−0.04	0	13.17	0.01	0.65	1.34	0.41	0.65	0.76	1.34	0.21	11.82	0.77	11.9	11.85	11.16
F.F	0	0∼0.1	0.47	0	0	−0.04	0	13.16	0	0.65	1.34	0.41	0.65	0.76	1.34	0.21	11.82	0.76	11.89	11.84	11.16

REF. NO.	Q6015			Q6016			Q6017			Q6018			Q6019			Q6020			Q6021		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	−0.01	0.05	0.62	−0.02	11.89	−0.01	11.92	11.81	11.17	−0.01	0.07	0.69	11.92	0	11.9	−0.03	11.9	0.07	11.92	0.39	11.9
REC	0	0.05	0.63	−0.02	0	0.62	11.91	0.04	11.9	−0.01	11.89	0.2	11.91	11.89	11.21	−0.03	0.05	0.66	11.9	11.88	11.2
PLAY	0	11.59	0.15	−0.02	11.87	0	11.89	11.79	11.16	0	0.08	0.7	11.91	−0.01	11.9	−0.02	11.89	0.05	11.9	0.34	11.89
CUE	−0.02	11.58	0.14	−0.03	11.86	−0.01	11.88	11.77	11.14	−0.02	0.06	0.68	11.88	−0.03	11.85	−0.03	11.87	0.04	11.88	0.32	11.87
REV	0	11.58	0.17	−0.03	11.86	−0.01	11.89	11.78	11.15	0	0.08	0.7	11.89	−0.02	11.88	−0.03	11.88	0.05	11.89	0.33	11.88
REW	0	0.06	0.63	−0.02	11.87	0	11.9	11.79	11.16	0	0.07	0.69	11.89	−0.02	11.88	−0.04	11.88	0.05	11.9	0.38	11.88
F.F	−0.02	0.04	0.61	−0.02	11.87	0	11.9	11.79	11.15	−0.02	0.07	0.68	11.89	−0.02	11.88	−0.04	11.88	0.05	11.9	0.37	11.88

REF. NO.	Q6022			Q6023			Q6024			Q6025			Q6026			Q6027			Q6028		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	−0.01	11.9	0.1	0.01	0.2	0.03	−0.03	5.14	0.13	−0.04	5.14	0.12	−0.03	5.14	0.2	−0.03	20.11	0.03	−0.03	20.31	−0.04
REC	0	0.09	0.68	0	0.01	0.61	−0.02	5.13	−0.12	4.4	5.13	5.05	3.8	5.12	4.43	−0.02	18.4	−0.02	−0.02	11.83	1.33
PLAY	0	11.9	0.1	0.01	0.02	0.62	−0.02	5.13	0.12	4.4	5.12	5.04	3.6	5.13	4.23	−0.02	18.82	−0.02	−0.02	11.83	1.34
CUE	−0.02	11.85	0.08	0	0.01	0.62	4.39	5.11	5.04	−0.03	5.11	0.1	3.59	5.11	4.22	−0.03	0.66	1.33	−0.03	0.65	−0.03
REV	0	11.88	0.1	0	0.01	0.61	4.39	5.12	5.05	−0.03	5.12	0.12	3.59	5.11	4.22	−0.03	0.66	1.33	−0.03	0.65	−0.03
REW	0	11.88	0.1	0	0.18	0.02	4.4	5.13	5.03	−0.03	5.12	0.12	−0.03	5.12	−0.03	−0.03	0.66	1.33	−0.03	0.65	−0.03
F.F	−0.02	11.88	0.09	0	0.18	0.02	4.4	5.13	5.05	−0.03	5.12	0.11	−0.03	5.12	0.18	−0.03	0.66	1.33	−0.03	0.65	−0.03

REF. NO.	Q6029			Q6030			Q6031			Q6032			Q6033			Q6034			Q6035		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	−0.03	20.03	−0.03	20.08	0.12	19.97	0.16	18.98	0.12	−0.03	9.14	0.31	8.72	10.4	9.13	−0.01	8.74	0.08	8.73	0	8.73
REC	−0.02	0.66	1.32	17.6	0.8	17.6	0.07	17.6	0.4	−0.03	9.12	0.32	8.74	10.6	9.12	−0.02	8.73	−0.01	8.73	0.01	8.73
PLAY	−0.01	0.68	1.33	18.92	0	17.6	0.12	17.6	−0.5	−0.02	9.13	0.32	8.71	10.4	9.12	−0.01	8.73	0.08	8.73	0	8.71
CUE	−0.02	0.67	1.33	18.8	0	17.6	0.12	17.6	−0.5	−0.03	9.1	0.33	8.68	10.2	9.1	−0.02	8.69	0.08	8.69	0	8.7
REV	−0.02	0.67	1.33	17.6	0	17.6	0.12	17.6	−0.5	−0.03	9.12	0.31	8.73	10.2	9.12	−0.02	8.72	0.07	8.71	0.14	8.71
REW	−0.03	19.78	−0.03	19.37	0	19.25	0.08	17.98	0.02	−0.03	9.11	0.31	8.70	11.24	9.1	−0.01	8.7	0.07	8.7	0	8.71
F.F	−0.03	19.8	−0.03	19.68	0	19.22	0.08	17.98	0.02	−0.03	9.12	0.31	8.7	11.3	9.1	−0.02	8.7	0.07	8.71	0	8.71

REF. NO.	Q6036			Q6037			Q6038			Q6039			Q6040			Q6041			Q6042		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	−0.01	0	−0.01	8.73	0	8.74	−0.01	0	−0.01	−0.01	8.72	−0.01	−0.01	0.09	0.62	−0.01	0.11	0.67	−0.01	11.89	0.07
REC	−0.02	0.02	−0.02	8.72	0	8.7	−0.02	0	−0.02	−0.02	8.71	0.06	−0.02	11.88	0.67	−0.02	11.76	0.66	−0.02	11.88	0.06
PLAY	−0.01	0	−0.01	8.72	0	8.73	−0.01	0.07	−0.01	−0.01	8.71	0.06	0.01	11.87	0.02	−0.01	11.76	−0.02	−0.01	11.87	0.07
CUE	−0.01	0	−0.02	8.7	0	8.7	−0.01	0	−0.01	−0.01	8.7	0.05	−0.02	11.86	0.01	−0.03	11.75	0.22	−0.03	11.86	0.06
REV	−0.02	0.03	−0.01	8.71	0	8.71	−0.02	0.02	−0.02	−0.02	8.72	0.06	−0.01	11.86	0.02	−0.02	11.74	0.23	−0.02	11.86	0.07
REW	−0.02	0	−0.01	8.71	0	8.71	−0.02	0	−0.02	−0.02	8.71	0.06	−0.02	0.08	0.62	−0.02	0.1	0.66	−0.02	11.87	0.06
F.F	−0.01	0	−0.02	8.71	0	8.71	−0.02	0	−0.02	−0.01	8.71	0.05	−0.02	0.08	0.61	−0.02	0.1	0.66	−0.02	11.87	0.05

REF. NO.	Q6043			Q6044			Q6045			Q6046			Q6047			Q6048			Q6049		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0.02	0.59	0	4.21	0.1	0	10.61	0.04	0	9.25	−0.04	−0.03	3.79	0.06	−0.04	0.06	0.63	−0.03	0	0.57
REC	−0.01	0.03	0.57	0	0.04	0.63	−0.01	10.6	0.03	−0.01	9.89	−0.01	−0.02	0.02	0.58	−0.02	11.82	0.02	−0.02	4.95	0.02
PLAY	0	0.07	0.57	0	0.05	0.64	0	10.6	0.04	−0.01	9.24	0	−0.02	−0.03	0.58	−0.02	11.82	0.02	−0.02	4.95	0.03
CUE	0	0.07	0.57	0	0.05	0.64	0	0.09	0.67	0	9.21	0	−0.03	0.02	0.58	−0.02	11.78	0.03	−0.03	4.93	0.02
REV	−0.01	0.06	0.57	−0.01	0.04	0.63	−0.01	0.06	0.67	−0.01	9.23	−0.01	−0.04	0.03	0.58	−0.02	11.77	0.02	−0.02	4.94	0.03
REW	0	0.02	0.59	0	4.2	0.1	0	10.59	0.04	0	9.23	0	−0.03	0.06	0.64	−0.03	0.06	0.64	−0.03	0	0.57
F.F	0	0.02	0.59	0	4.2	0.09	0	10.59	0.04	0	9.23	0	−0.03	3.78	0.06	−0.03	0.06	0.63	−0.03	0	0.57

REF. NO.	Q6050			Q6051			Q6052			Q6055			Q6056			Q6057			Q6058		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	−0.01	6.7	0.04	−0.01	6.69	0.13	−0.01	9.34	−0.01	−0.01	0.06	0.62	−0.01	−0.01	0.57	1.6	1.4	1	1.86	10.4	1.36
REC	−0.02	0.08	0.64	0	2.45	0.12	0	9.45	0	−0.02	2.45	−0.01	−0.02	−0.01	0.56	3	3	2.8	3.2	10.6	3
PLAY	−0.01	0.09	0.65	0	2.45	0.14	0	9.45	0	−0.01	2.45	−0.01	−0.01	−0.01	0.57	6.2	3.2	2.7	3.26	10.4	3.89
CUE	0	6.29	0.19	−0.02	6.29	0.12	−0.02	0.09	0.65	0	6.29	−0.01	−0.02	5.69	0.03	6.4	6.28	6.07	6.47	10.2	7.12
REV	−0.02	6.3	0.18	0	6.30	0.13	0	0.10	0.67	−0.02	6.3	−0.02	−0.02	5.68	0.04	6.2	6.28	6.06	6.47	10.2	7.12
REW	−0.02	7.53	0.03	0	0.07	0.63	0	9.45	0	−0.02	7.53	−0.01	−0.02	−0.01	0.57	9	8.28	7.76	8.52	11.24	9.15
F.F	−0.01	7.52	0.03	0.02	0.06	0.62	−0.02	9.45	−0.01	−0.01	7.52	−0.01	−0.02	−0.01	0.57	9	8.24	7.71	8.37	11.3	9.06

REF. NO.	Q6059			Q6060			Q6061			Q6062			Q6063			Q6064			Q6065		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	1.87	1.87	1.86	−0.01	1.86	0.09	1.87	−0.02	1.99	1.8	0.8	1.87	0.01	0	−0.01	−0.01	0.8	−0.01	−0.01	1.87	0
REC	3.0	3.0	2.5	−0.02	0.01	0.67	1	0.08	1	3.0	3.0	1	0	0.08	0.71	−0.02	3	−0.02	0.71	0.79	1.38
PLAY	3.2	3.1	2.5	−0.01	0.02	0.68	3.1	0.09	3.1	3.0	2.9	3.1	0	0.09	0.72	−0.01	3	−0.01	0.72	0.8	1.39
CUE	6.29	3.64	6.29	−0.02	6.29	0.03	3.72	3.58	2.97	3.65	0.13	3.72	−0.02	3.58	−0.02	−0.01	0.13	0.73	−0.02	3.65	0.03
REV	6.31	3.81	6.3	−0.01	6.3	0.04	3.76	0.14	3.76	3.74	3.6	3.76	0.01	0.14	0.74	−0.02	3.52	−0.02	0.74	0.64	1.41
REW	8.33	8.24	7.58	−0.01	0.04	0.7	8.28	0.03	8.30	8.22	8.2	8.28	0	0.03	0.74	−0.02	8.18	−0.02	0.74	0.99	1.45
F.F	8.39	8.20	7.53	−0.02	0.04	0.69	8.13	8.09	7.46	8.19	0.02	8.13	−0.02	8.18	−0.02	−0.01	0.02	0.73	−0.02	8.29	0.03

REF. NO.	Q6066			Q6067			Q6068			Q6069			Q6070		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	−0.01	2.04	0.04	−0.01	5.13	0.27	−0.03	5.14	0.66	−0.01	0.06	0.58	−0.01	0.09	0.59
REC	−0.02	3	0.03	−0.02	5.12	0	−0.05	5.12	0.01	−0.02	3.15	−0.02	−0.02	0.67	−0.02
PLAY	−0.01	3	0.04	−0.01	5.12	0.01	−0.03	5.13	0.08	−0.01	3.15	0.01	−0.01	0.68	−0.01
CUE	0.73	0.84	1.42	−0.03	0.69	0	4.19	5.11	4.77	−0.02	6.27	0	−0.01	0.03	−0.01
REV	−0.02	3.66	0.04	−0.02	0.7	0	4.22	5.11	4.78	−0.02	6.28	−0.02	−0.02	0.05	−0.01
REW	−0.02	8.25	0.03	−0.02	5.12	0.27	−0.03	5.12	0.02	−0.02	8.3	−0.01	−0.02	0.7	−0.01
F.F	0.73	1	1.44	−0.02	5.12	0.27	−0.03	5.12	0.01	−0.02	8.27	−0.01	−0.02	0.69	−0.01

SYSTEM CONTROL ICs D.C. VOLTAGE CHART

REF. NO.	IC6001															
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STOP	−0.01	0∼5.2	0.01	0.01	0∼5.1	0.08	0.08	0.11	0.08	0.3∼4.6	0∼5	0∼5	0∼5	—	—	—
REC	−0.01	0.01	0.02	0.02	0.02	3.93	0.08	0.11	0.09	0.3∼4.6	0∼5	0∼5	0∼5	—	—	—
PLAY	0	0.01	0.02	0.02	0.02	0∼5	0.07	0.11	0.09	0.3∼4.6	0∼5	0∼5	0∼5	—	—	—
CUE	−0.02	0	0.01	2.69	0.01	0	3.93	0.12	0.08	0.3∼4.6	0∼5	0∼4.5	0∼5	—	—	—
REV	0	0.02	0.02	2.78	0.03	0∼5	0.09	0.12	0.09	0.3∼4.6	0∼5	0∼4.5	0∼5	—	—	—
REV	0	0.02	0.02	0.02	0∼5.2	0∼5	0.08	0.12	0.09	0.3∼4.6	0∼5	0∼5	0∼5	—	—	—
F.F	−0.02	0.01	0.01	0.01	0∼5.1	0	3.94	0.10	0.08	0.3∼4.6	0∼5	0∼5	0∼5	—	—	—

REF. NO.	IC6001															
MODE	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
STOP	—	0∼5.1	0∼5	0∼4.5	0.4∼0.6	0.09	0.19	0.12	0.12	−0.04	5.05	5.14	−0.01	0∼5.2	0.2	0.11
REC	—	0∼5.1	0∼5	0∼4.5	0.4∼3.8	0.08	4.43	5.05	0.12	−0.03	5.04	5.13	5.12	0∼5.2	4.44	0.11
PLAY	—	0∼5.1	0∼5	0∼4.5	0.4∼3.8	0.09	4.23	5.05	0.12	−0.03	5.05	5.13	−0.02	0∼5.2	4.44	0.11
CUE	—	0∼5	0∼5	0∼4.5	0.4∼4.5	0.08	4.22	0.1	5.04	−0.03	5.03	5.11	−0.03	0∼5.2	3.85	4.17
REV	—	0∼5	0∼5	0∼4.5	0.4∼4.5	4.83	4.22	0.12	5.04	−0.03	5.04	5.12	5.11	0∼5.2	3.86	0.12
REW	—	0∼5	0∼5	0∼4.5	0.4∼4.5	0.09	0.19	0.12	5.05	−0.03	5.04	5.13	−0.02	0∼5.2	0.2	0.12
F.F	—	0∼5	0∼5	0∼4.5	0.4∼4.5	0.08	0.18	0.11	5.05	−0.03	5.04	5.11	−0.02	0∼5.2	0.19	0.11

REF. NO.	IC6001							
MODE	33	34	35	36	37	38	39	40
STOP	0.09	0.2	0.2	0.2	0.2	0.2	5.14	0∼3.3
REC	0.09	4.18	0.19	0.19	0.2	0.2	5.13	0∼3.3
PLAY	0.09	0.2	0.2	0.19	0.2	0.2	5.13	0∼3.3
CUE	0.08	0.19	0.18	0.18	0.19	0.19	5.11	0∼3.3
REV	4.68	0.2	0.2	0.2	0.21	0.21	5.12	0∼3.3
REW	0.09	0.2	0.2	4.79	0.2	0.2	5.13	0∼3.3
F.F	0.09	0.2	0.19	0.19	4.8	0.19	5.13	0∼3.3

REF. NO.	IC6002															
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STOP	0.3∼4.6	0∼5	0∼5.1	0.01	0.01	0∼5.2	−0.01	5.13	0.14	0.03	5.13	0.03	0.03	0.03	0.03	5.13
REC	0.3∼4.6	0∼5	0.02	0.02	0.02	0.01	−0.01	0	0.14	0.03	0.03	0.03	0.03	0.03	0.04	5.12
PLAY	0.3∼4.6	0∼5	0.02	0.02	0.02	0.01	0	0	0.15	0.03	0.04	0.04	0.04	0.04	0.04	5.12
CUE	0.3∼4.6	0∼5	0.02	2.69	0.01	0	−0.02	0.01	0.14	5.11	0.05	0.03	0.03	0.03	0.03	5.11
REV	0.3∼4.6	0∼5	0.03	2.78	0.02	0.02	0	0	0.16	5.11	0.06	0.04	0.04	0.04	0.04	5.10
REW	0.3∼4.6	0∼5	0∼5.1	0.02	0.02	0.02	0	0	0.14	0.03	5.12	0.04	0.04	0.04	0.04	5.12
F.F	0.3∼4.6	0∼5	0∼5.1	0.01	0.01	0.01	−0.02	0.01	0.13	0.03	5.11	0.03	0.03	0.03	0.03	5.12

REF. NO.	IC6003															
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STOP	5.14	0∼5.2	0∼5.2	5.14	0.09	5.14	0.11	−0.04	0.2∼5	0∼5.2	0∼5	0∼5.2	−0.2∼0.2	0∼5	0∼5.2	0
REC	5.12	0∼5.2	0∼5.2	5.12	0.09	5.12	0.11	−0.02	0.2∼5	0∼5.2	0∼5	0∼5.2	−0.2∼0.2	0∼5	0∼5.2	0
PLAY	5.12	0∼5.2	0∼5.2	5.12	0.09	5.12	0.11	−0.02	0.2∼5	0∼5.2	0∼4.5	0∼5.2	−0.2∼0.2	0∼5	0∼5.2	0
CUE	5.11	0∼5.2	0∼5.2	5.11	0.08	0	4.17	−0.03	0.2∼5	0∼5.2	0∼5	0∼5.2	−0.2∼0.2	0∼5	0∼5.2	0
REV	5.12	0∼5.2	0∼5.2	0	4.68	5.11	0.12	−0.03	0.2∼5	0∼5.2	0∼4.5	0∼5.2	−0.2∼0.2	0∼5	0∼5.2	0
REW	5.12	0∼5.2	0∼5.2	5.12	0.09	5.12	0.12	−0.03	0.2∼5	0∼5.2	0∼5	0∼5.2	−0.2∼0.2	0∼5	0∼5.2	0
F.F	5.12	0∼5.2	0∼5.2	5.12	0.09	5.12	0.11	−0.03	0.2∼5	0∼5.2	0∼5	0∼5.2	−0.2∼0.2	0∼5	0∼5.2	0

REF. NO.	IC6004															
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STOP	0∼5.2	0.01	0∼5	0.01	0∼5	0.1	0∼5.1	0	0∼5.1	5.08	−0.2∼5	5.14	0∼5	4.68	0∼5.1	5.14
REC	0∼5.2	0.01	0∼0.2	0.01	0∼5	0.09	0∼5.1	0	0∼5.1	5.07	−0.2∼5	5.14	0∼0.2	−0.05	0∼5.1	5.12
PLAY	0∼5.2	0.01	0∼0.2	0.01	0∼5	0.09	0∼5.1	0	0∼5.1	5.07	−0.2∼5	5.14	0∼0.2	−0.05	0∼5.1	5.12
CUE	0∼5.2	0.01	0∼5	0.01	0∼5	0.06	0∼5.1	0	0∼5.1	5.06	−0.2∼5	−0.05	0∼5	4.31	0∼5.1	5.11
REV	0∼5.2	0.01	0∼5	0.01	0∼5	0.08	0∼5.1	0	0∼5.1	5.06	−0.2∼5	−0.05	0∼5	4.32	0∼5.1	5.11
REW	0∼5.2	0.01	0∼5	0.01	0∼5	0.09	0∼5.1	0	0∼5.1	5.07	−0.2∼5	5.12	0∼5	4.67	0∼5.1	5.12
F.F	0∼5.2	0.01	0∼5	0.01	0∼5	0.09	0∼5.1	0	0∼5.1	5.07	−0.2∼5	5.12	0∼5	4.67	0∼5.1	5.12

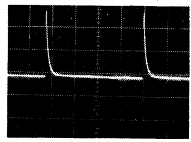
REF. NO.	IC6005															
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STOP	0∼5.2	0.06	0∼5.2	4.5	0∼5.2	0	0∼5.1	0	0∼5.1	0	0∼5.1	5.09	0∼5.2	−0.03	0∼5.2	5.13
REC	0∼5.2	0.07	0∼0.2	0∼4.5	0∼5.2	0	0∼5.1	0	0∼5.1	0	0∼5.1	5.09	0∼5.2	4.98	0∼5.1	5.12
PLAY	0∼5.2	0.07	0∼0.2	0∼4.5	0∼5.2	0	0∼5.1	0	0∼5.1	0	0∼5.1	5.09	0∼5.2	4.98	0∼5.1	5.12
CUE	0∼5.2	0.05	0∼5.2	0∼4.5	0∼5.2	0	0∼5.1	0	0∼5.1	0	0∼5.1	5.07	0∼5.1	4.97	0∼5.2	5.11
REV	0∼5.2	0.06	0∼5.2	0∼4.5	0∼5.2	0	0∼5.1	0	0∼5.1	0	0∼5.1	5.08	0∼5.1	4.98	0∼5.2	5.11
REW	0∼5.2	0.06	0∼5.2	0∼4.5	0∼5.2	−0.01	0∼5.1	0	0∼5.1	0	0∼5.1	5.08	0∼5.1	−0.04	0∼5.2	5.12
F.F	0∼5.2	0.06	0∼5.2	0∼4.5	0∼5.2	−0.01	0∼5.1	0	0∼5.1	0	0∼5.1	5.08	0∼5.1	−0.04	0∼5.2	5.12

REF. NO.	IC6006													
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
STOP	5.13	0.2	−0.01	−0.01	0.09	0.19	−0.01	5.13	5.13	5.05	−0.01	5.13	0	5.12
REC	0	4.18	−0.01	−0.01	0.09	4.43	−0.01	0.03	0	−0.01	−0.01	0	0	5.12
PLAY	0	0.2	−0.01	−0.01	0.09	4.23	−0.01	0	0	0	−0.01	0	0	5.13
CUE	0.01	0.18	−0.01	0	0.08	4.22	−0.01	0.05	−0.01	0	−0.01	−0.01	3.70	5.11
REV	0	0.2	−0.01	5.65	4.68	4.22	−0.01	0.06	0	−0.01	−0.01	0	4.20	5.12
REW	0	0.19	−0.01	−0.01	0.10	0.2	−0.01	5.12	0	−0.01	−0.01	0	0	5.12
F.F	0	0.2	−0.01	−0.01	0.09	0.18	−0.01	5.11	−0.01	−0.01	−0.01	−0.01	−0.01	5.12

REF. NO.	IC6007													
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
STOP	0.07	0.07	5.13	2.56	0.6	2.6∼5	0.39	5.06	2.55	4.93	2.56	0	0.01	0.01
REC	0.07	0.07	5.12	2.55	0.66	2.6∼5	0.02	5.01	2.55	5.01	2.55	0	0.01	0.01
PLAY	0.07	0.07	5.12	2.55	0.68	2.6∼5	0.02	5.05	2.56	4.9	2.55	0	0.01	0.01
CUE	0.07	0.07	5.11	2.55	0.68	2.6∼5	0.02	5	2.55	5	2.55	0	0.01	0.01
REV	0.06	0.07	5.11	2.55	0.68	2.6∼5	0.02	5.02	2.55	5.03	2.55	0	0.01	0.01
REW	0.07	0.07	5.12	2.55	0.61	2.6∼5	0.39	5.01	2.55	5.01	2.55	0	0.01	0.01
F.F	0.07	0.07	5.12	2.56	0.6	2.6∼5	0.38	5.01	2.55	4.99	2.55	0	0.01	0.01

REF. NO.	IC6008							
MODE	1	2	3	4	5	6	7	8
STOP	1.35	1.86	1.4	−0.02	2.51	2.63	1.35	11.91
REC	3.87	3.14	3.13	−0.02	2.51	2.62	1.34	11.9
PLAY	3.9	3.19	3.16	−0.02	2.51	2.62	1.34	11.9
CUE	7.13	6.3	6.27	−0.01	2.5	2.61	1.37	11.88
REV	7.15	6.3	6.28	−0.01	2.5	2.61	1.36	11.89
REW	9.1	8.37	8.4	−0.01	2.5	2.62	1.37	11.9
F.F	8.99	8.4	8.3	−0.01	2.5	2.62	1.37	11.9

SERVO & SECAM COLOUR SCHEMATIC DIAGRAM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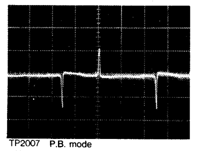
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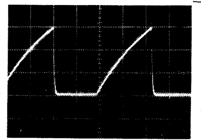
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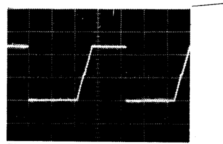
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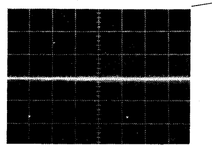
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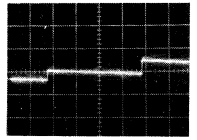
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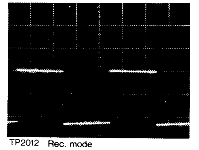
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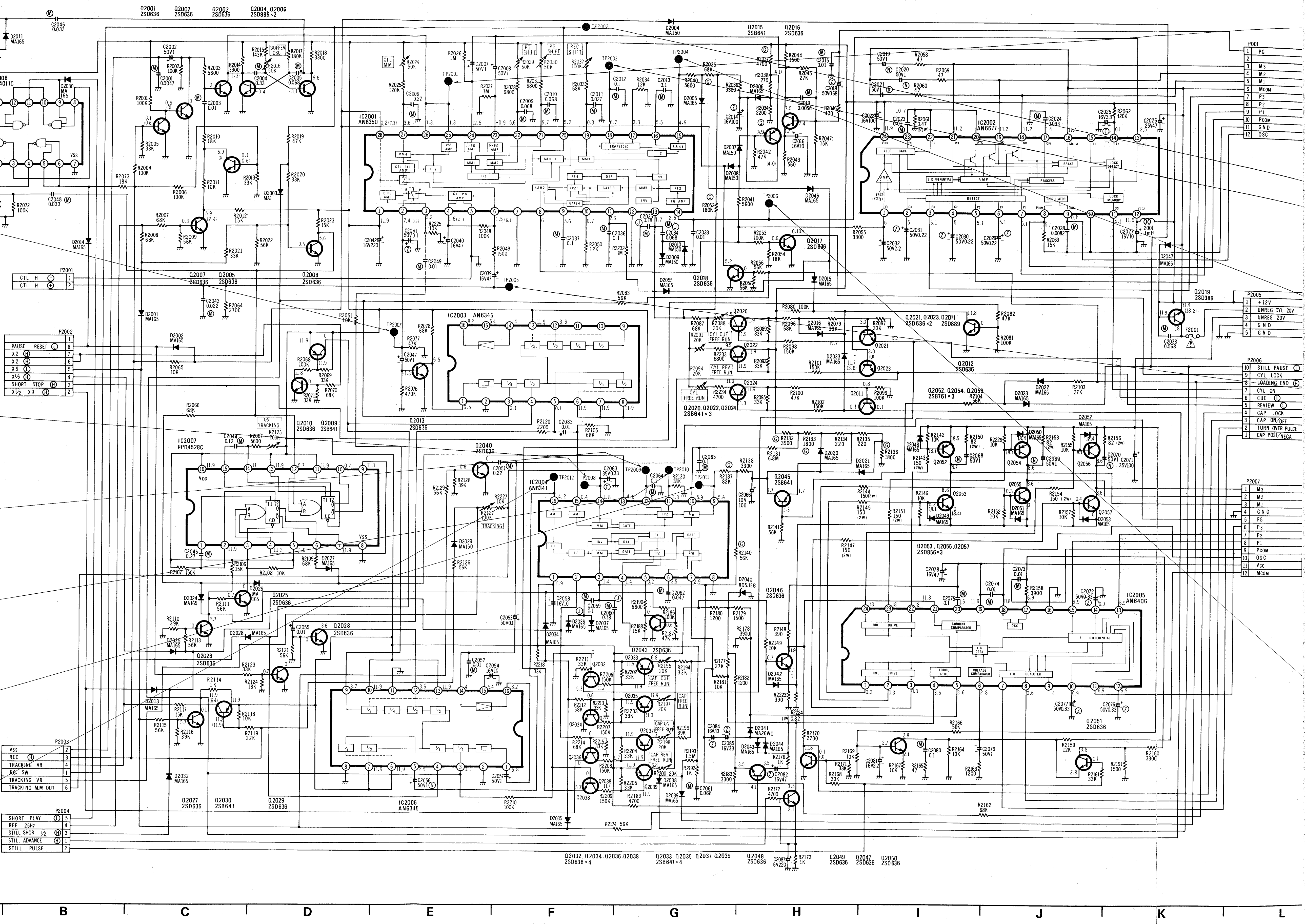
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Q2004, Q2006 2SD889×2
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Q2007 2SD636
Q2008 2SD636
Q2009 2SB641
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Q2017 2SD636
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Q2019 2SD389
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Q2051 2SD636
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Q2033, Q2035, Q2037, Q2039 2SB641×4
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CTL MM
PG SHIFT
REC SHIFT
1/2 TRACKING
TRACKING
CYL CUE FREE RUN
CYL REV FREE RUN
CYL FREE RUN
CAP CUE FREE RUN
CAP FREE RUN
CAP 1/2 FREE RUN
CAP REV FREE RUN
TP2001
TP2002
TP2003
TP2004
TP2005
TP2006
TP2007
TP2008
TP2009
TP2010
TP2011
TP2012
P2001
CTL H ⊖ 1
CTL H ⊕ 2
P2002
1
PAUSE RESET Ⓛ 8
X2 Ⓗ 7
X2 Ⓗ 6
X9 Ⓛ 5
X½ Ⓗ 4
SHORT STOP Ⓗ 3
X½ · X9 Ⓗ 2
P2003
VSS 2
REC Ⓗ 3
TRACKING VR 4
P.G. SW 1
TRACKING VR 5
TRACKING M.M OUT 6
P2004
SHORT PLAY Ⓛ 5
REF 25Hz 4
STILL SHOR ½ Ⓗ 3
STILL ADVANCE Ⓗ 1
STILL PULSE 2
P001
1 PG
2
3 M3
4 M2
5 M1
6 MCOM
7 P3
8 P2
9 P1
10 PCOM
11 GND
12 OSC
P2005
1 +12V
2 UNREG CYL 20V
3 UNREG 20V
4 GND
5 GND
P2006
10 STILL PAUSE Ⓛ
9 CYL LOCK
8 LOADING END Ⓗ
7 CYL ON
6 CUE Ⓛ
5 REVIEW Ⓛ
4 CAP LOCK
3 CAP ON/OFF
2 TURN OVER PULCE
1 CAP POSI/NEGA
P2007
1 M3
2 M2
3 M1
4 GND
5 FG
6 P3
7 P2
8 P1
9 PCOM
10 OSC
11 VCC
12 MCOM
F2001
7
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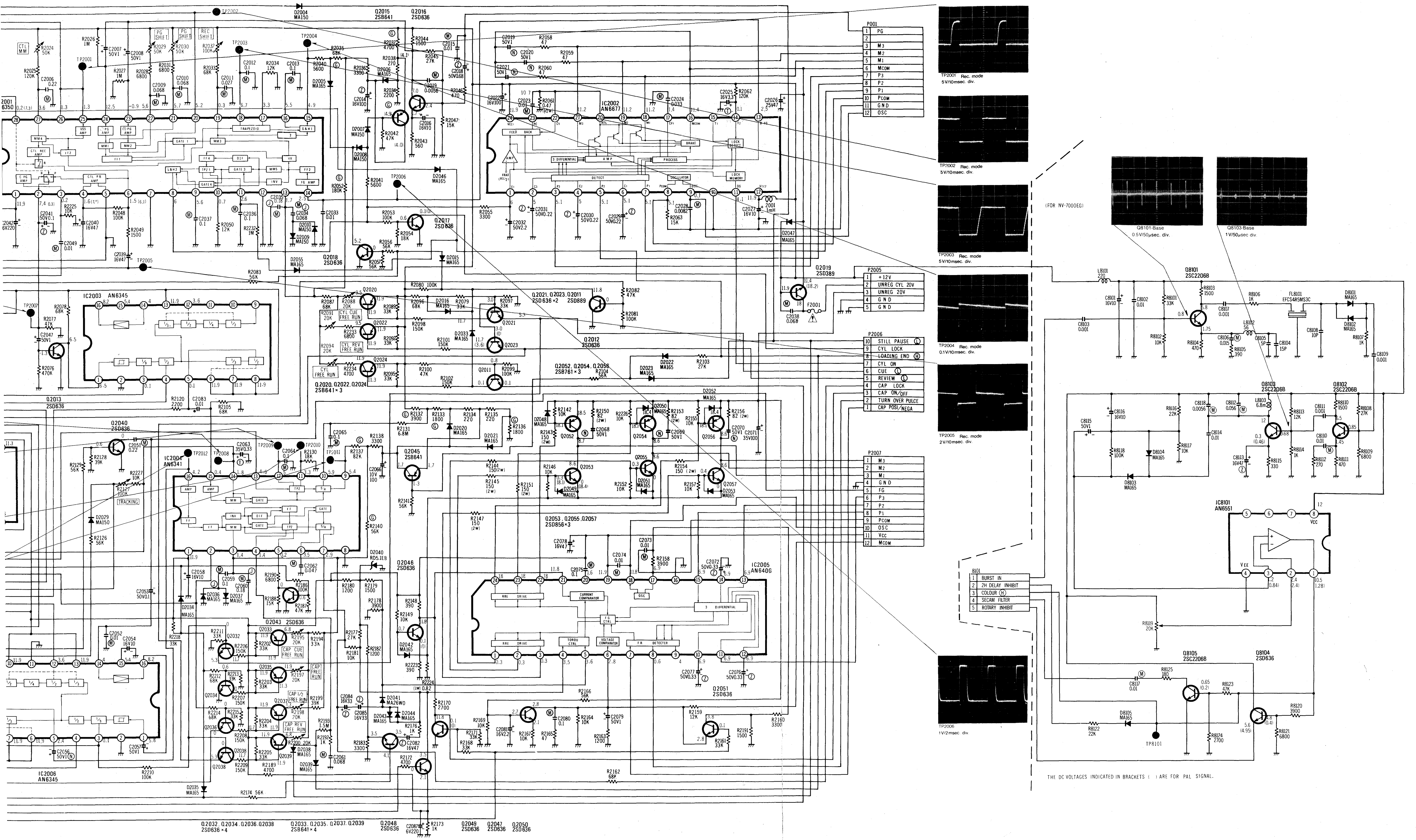
L

C DIAGRAM

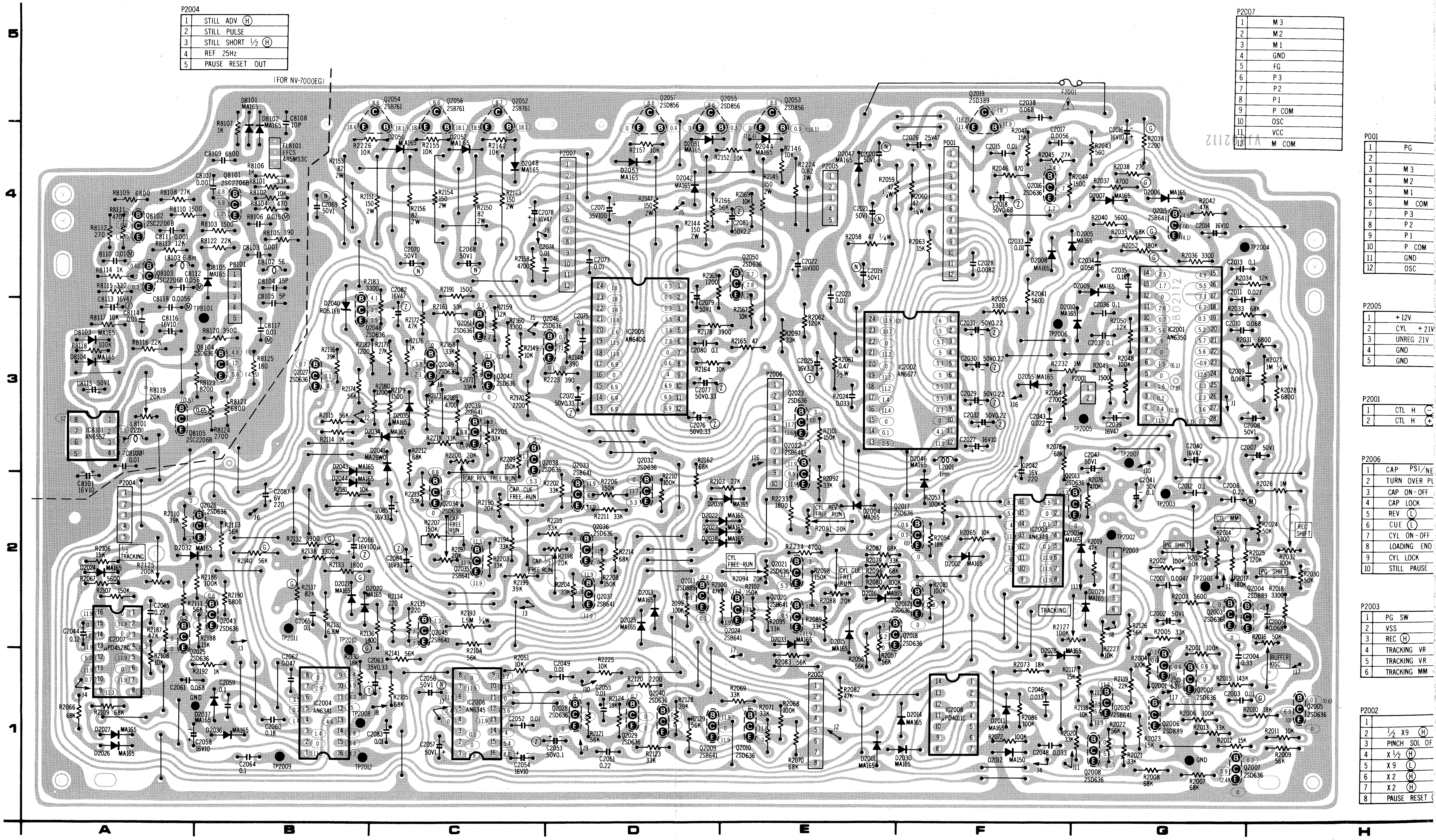


TP2001
TP2002
TP2003
TP2004
TP2005
TP2006
TP2007
TP2008
TP2009
TP2010
TP2011
TP2012
TP8101
IC2002 AN6677
IC2003 AN6345
IC2004 AN6341
IC2005 AN6406
IC2006 AN6345
IC8101 AN6551
Q2015 2SB641
Q2016 2SD636
Q2017 2SD636
Q2018 2SD636
Q2019 2SD389
Q2020, Q2022, Q2024 2SB641×3
Q2021, Q2023, Q2011 2SD636×2 2SD889
Q2012 2SD636
Q2013 2SD636
Q2040 2SD636
Q2045 2SB641
Q2046 2SD636
Q2051 2SD636
Q2052, Q2054, Q2056 2SB761×3
Q2053, Q2055, Q2057 2SD856×3
Q2032, Q2034, Q2036, Q2038 2SD636×4
Q2033, Q2035, Q2037, Q2039 2SB641×4
Q2043 2SD636
Q2048 2SD636
Q2049 2SD636
Q2047 2SD636
Q2050 2SD636
Q8101 2SC2206B
Q8102 2SC2206B
Q8103 2SC2206B
Q8104 2SD636
Q8105 2SC2206B
FL8101 EFCS4R5MS3C
L8101 220
F2001
P001
1 PG
2
3 M3
4 M2
5 M1
6 MCOM
7 P3
8 P2
9 P1
10 PCOM
11 GND
12 OSC
P2005
1 +12V
2 UNREG CYL 20V
3 UNREG 20V
4 GND
5 GND
P2006
10 STILL PAUSE
9 CYL LOCK
8 LOADING END
7 CYL ON
6 CUE
5 REVIEW
4 CAP LOCK
3 CAP ON/OFF
2 TURN OVER PULCE
1 CAP POSI/NEGA
P2007
1 M3
2 M2
3 M1
4 GND
5 FG
6 P3
7 P2
8 P1
9 PCOM
10 OSC
11 Vcc
12 MCOM
8101
1 BURST IN
2 2H DELAY INHIBIT
3 COLOUR
4 SECAM FILTER
5 ROTARY INHIBIT
(FOR NV-7000EG)
TP2001 Rec. mode 5V/10msec. div.
TP2002 Rec. mode 5V/10msec. div.
TP2003 Rec. mode 5V/10msec. div.
TP2004 Rec. mode 0.1V/10msec. div.
TP2005 Rec. mode 2V/10msec. div.
TP2006 1V/2msec. div.
Q8101-Base 0.5V/50μsec. div.
Q8103-Base 1V/50μsec. div.
CYL CUE FREE RUN
CYL REV FREE RUN
CYL FREE RUN
CAP CUE FREE RUN
CAP REV FREE RUN
CAP 1/2 FREE RUN
CAP FREE RUN
TRACKING
FEED BACK
3 DIFFERENTIAL
AMP
DETECT
PROCESS
OSCILLATOR
BRAKE
LOCK MEMORY
TRAPEZOID
REC DRIVE
CURRENT COMPARATOR
FG CTRL
TORQU CTRL
VOLTAGE COMPARATOR
FR DETECTOR
OSC

THE DC VOLTAGES INDICATED IN BRACKETS ( ) ARE FOR PAL SIGNAL.

E F G H I J K L M

SERVO & SECAM COLOUR CIRCUIT BOARD (VEP02112A)


(FOR NV-7000EG)
IC2005 AN6406
IC2002 AN6677
IC2001 AN6350
IC2003 AN6349
IC2004 AN6341
IC2006 AN6345
IC2007 μPD4528C
IC2008 μPD4011C
IC8101 AN6552
FL8101 EFCS 4R5MS3C
F2001
CAP REV FREE RUN
CAP CUE FREE RUN
CAP FREE RUN
CYL REV FREE RUN
CYL FREE RUN
CYL CUE FREE RUN
½ TRACKING
TRACKING
CTL MM
PG SHIFT
PG SHIFT
REC SHIFT
BUFFER OSC
TP2001
TP2002
TP2003
TP2004
TP2005
TP2006
TP2007
TP2008
TP2009
TP2010
TP2011
TP2012
TP8101
GND
A
B
C
D
E
F
G
H
1
2
3
4
5

P2004

1	STILL ADV Ⓗ
2	STILL PULSE
3	STILL SHORT ½ Ⓗ
4	REF 25Hz
5	PAUSE RESET OUT

P2C07

1	M 3
2	M 2
3	M 1
4	GND
5	FG
6	P 3
7	P 2
8	P 1
9	P COM
10	OSC
11	VCC
12	M COM

P001

1	PG
2	
3	M 3
4	M 2
5	M 1
6	M COM
7	P 3
8	P 2
9	P 1
10	P COM
11	GND
12	OSC

P2005

1	+12V
2	CYL +21V
3	UNREG 21V
4	GND
5	GND

P2001

1	CTL H ⊖
2	CTL H ⊕

P2006

1	CAP PSI/NE
2	TURN OVER PU
3	CAP ON-OFF
4	CAP LOCK
5	REV Ⓛ
6	CUE Ⓛ
7	CYL ON-OFF
8	LOADING END
9	CYL LOCK
10	STILL PAUSE

P2003

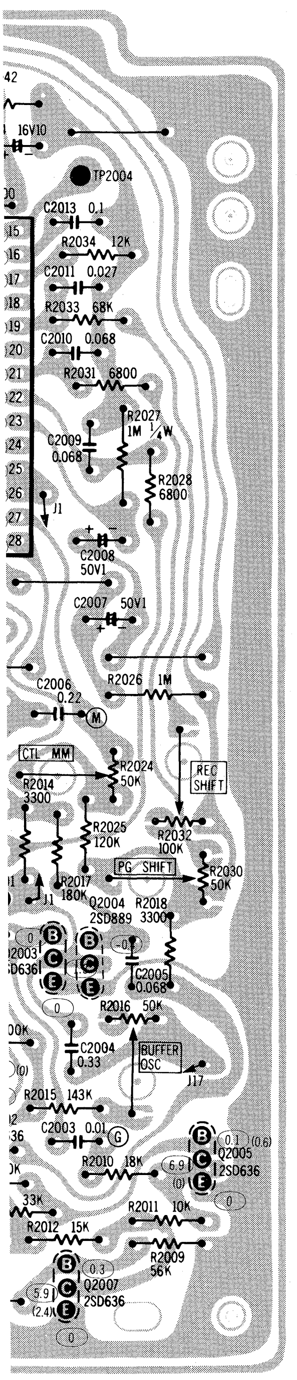
1	PG SW
2	VSS
3	REC Ⓗ
4	TRACKING VR
5	TRACKING VR
6	TRACKING MM

P2002

1	
2	½ X9 Ⓗ
3	PINCH SOL OF
4	X ½ Ⓗ
5	X 9 Ⓛ
6	X 2 Ⓗ
7	X 2 Ⓗ
8	PAUSE RESET

P2C07

1	M 3
2	M 2
3	M 1
4	GND
5	FG
6	P 3
7	P 2
8	P 1
9	P COM
10	OSC
11	VCC
12	M COM


42
16V10
TP2004
C2013 0.1
R2034 12K
C2011 0.027
R2033 68K
C2010 0.068
R2031 6800
R2027 1M 1/4W
C2009 0.068
R2028 6800
J1
C2008 50V1
C2007 50V1
C2006 0.22
R2026 1M
CTL MM
R2024 50K
REC SHIFT
R2014 3300
R2025 120K
R2032 100K
PG SHIFT
R2030 50K
R2017 180K
Q2004 2SD889
R2018 3300
C2005 0.068
R2016 50K
C2004 0.33
BUFFER OSC
J17
R2015 143K
C2003 0.01
R2010 18K
Q2005 2SD636
R2012 15K
R2011 10K
R2009 56K
Q2007 2SD636
15
16
17
18
19
20
21
22
23
24
25
26
27
28

P001

1	PG
2	
3	M 3
4	M 2
5	M 1
6	M COM
7	P 3
8	P 2
9	P 1
10	P COM
11	GND
12	OSC

P2005

1	+12V
2	CYL +21V
3	UNREG 21V
4	GND
5	GND

P2001

1	CTL H ⊖
2	CTL H ⊕

P2006

1	CAP PSI/NEGA
2	TURN OVER PULSE
3	CAP ON-OFF
4	CAP LOCK
5	REV Ⓛ
6	CUE Ⓛ
7	CYL ON-OFF
8	LOADING END Ⓗ
9	CYL LOCK
10	STILL PAUSE Ⓛ

P2003

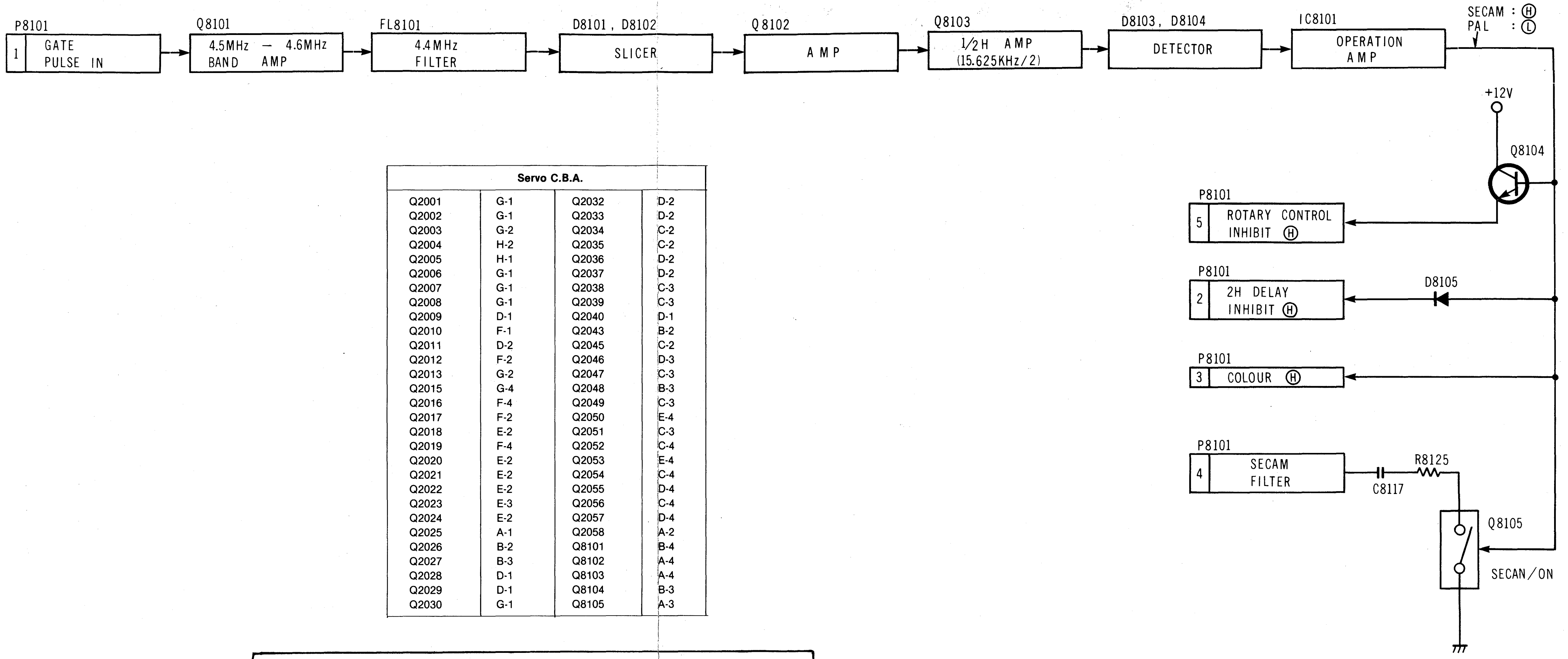
1	PG SW
2	VSS
3	REC Ⓗ
4	TRACKING VR
5	TRACKING VR
6	TRACKING MM OUT

P2002

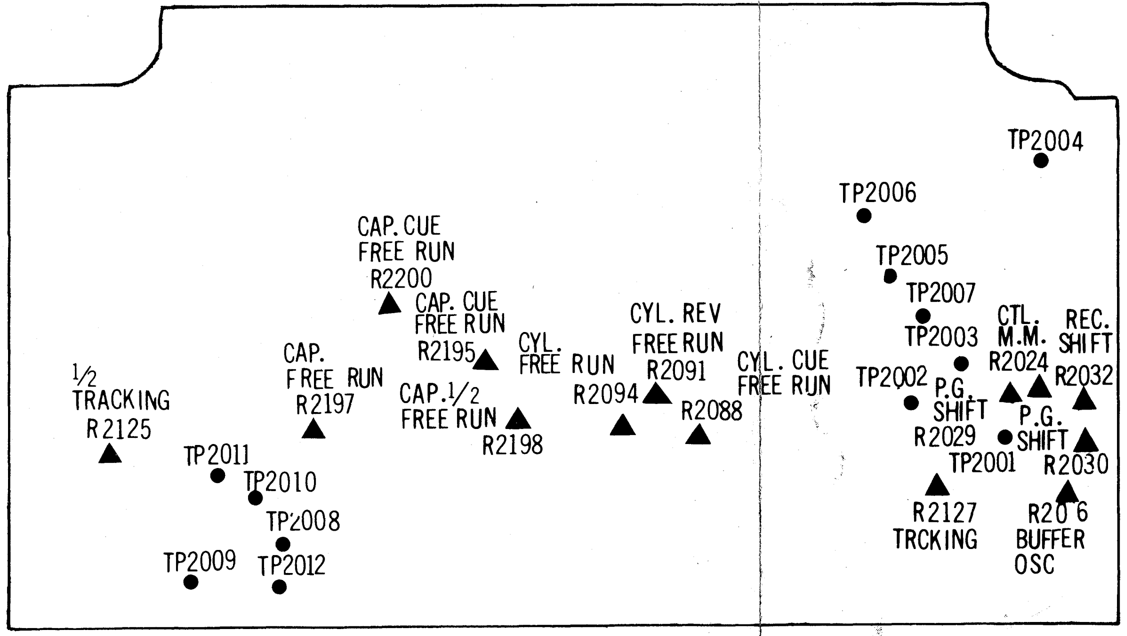
1	
2	1/2 X9 Ⓗ
3	PINCH SOL OFF Ⓗ
4	X 1/2 Ⓗ
5	X 9 Ⓛ
6	X 2 Ⓗ
7	X 2 Ⓗ
8	PAUSE RESET Ⓛ

H

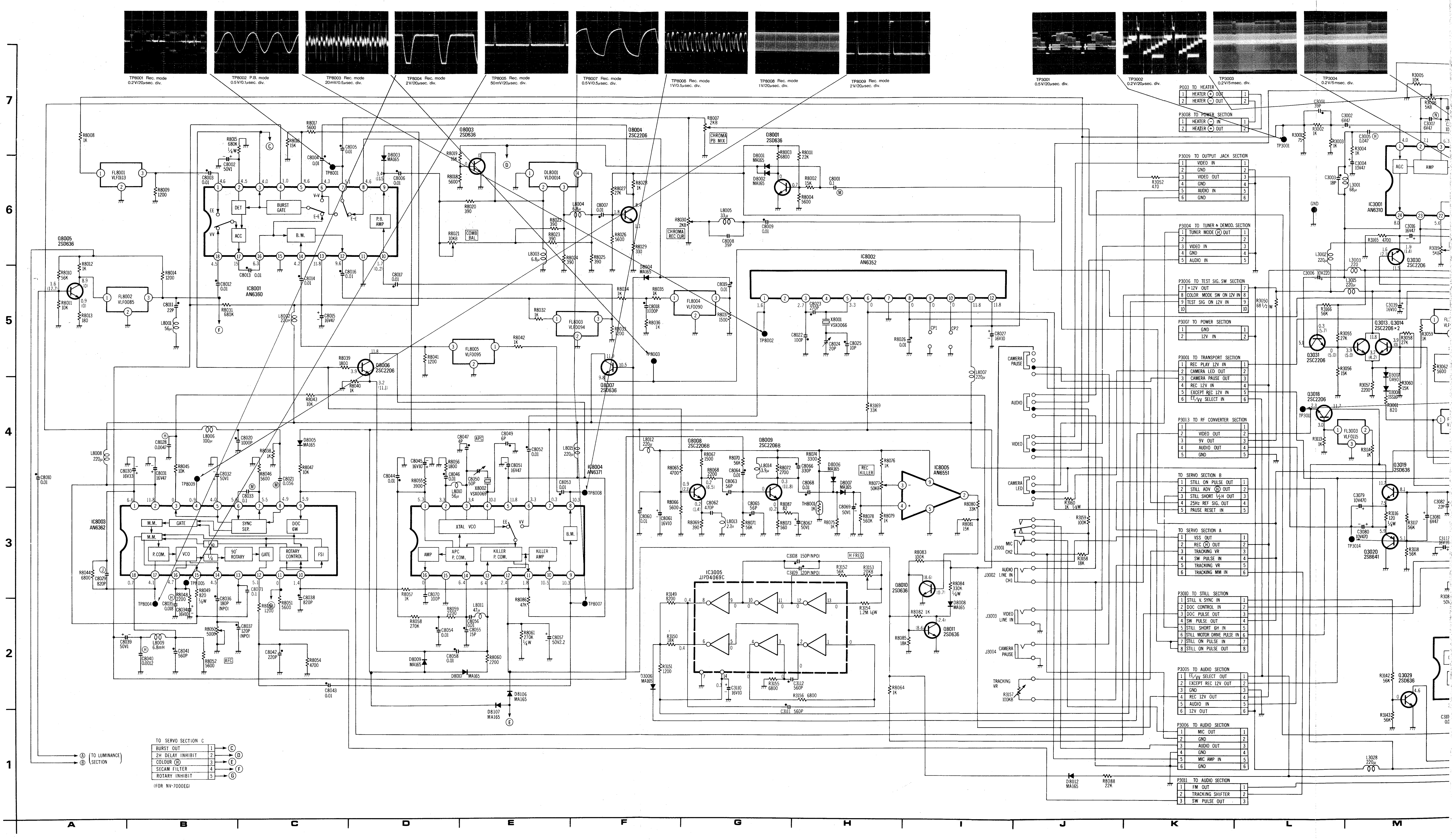
SECAM COLOUR BLOCK DIAGRAM

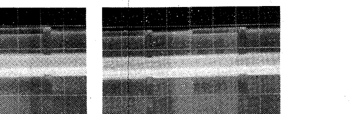

P8101
1 GATE PULSE IN
Q8101
4.5MHz — 4.6MHz BAND AMP
FL8101
4.4MHz FILTER
D8101, D8102
SLICER
Q8102
AMP
Q8103
1/2H AMP (15.625KHz/2)
D8103, D8104
DETECTOR
IC8101
OPERATION AMP
SECAM : Ⓗ
PAL : Ⓛ
+12V
Q8104
P8101
5 ROTARY CONTROL INHIBIT Ⓗ
P8101
2 2H DELAY INHIBIT Ⓗ
D8105
P8101
3 COLOUR Ⓗ
P8101
4 SECAM FILTER
C8117
R8125
Q8105
SECAN/ON

Servo C.B.A.			
Q2001	G-1	Q2032	D-2
Q2002	G-1	Q2033	D-2
Q2003	G-2	Q2034	C-2
Q2004	H-2	Q2035	C-2
Q2005	H-1	Q2036	D-2
Q2006	G-1	Q2037	D-2
Q2007	G-1	Q2038	C-3
Q2008	G-1	Q2039	C-3
Q2009	D-1	Q2040	D-1
Q2010	F-1	Q2043	B-2
Q2011	D-2	Q2045	C-2
Q2012	F-2	Q2046	D-3
Q2013	G-2	Q2047	C-3
Q2015	G-4	Q2048	B-3
Q2016	F-4	Q2049	C-3
Q2017	F-2	Q2050	E-4
Q2018	E-2	Q2051	C-3
Q2019	F-4	Q2052	C-4
Q2020	E-2	Q2053	E-4
Q2021	E-2	Q2054	C-4
Q2022	E-2	Q2055	D-4
Q2023	E-3	Q2056	C-4
Q2024	E-2	Q2057	D-4
Q2025	A-1	Q2058	A-2
Q2026	B-2	Q8101	B-4
Q2027	B-3	Q8102	A-4
Q2028	D-1	Q8103	A-4
Q2029	D-1	Q8104	B-3
Q2030	G-1	Q8105	A-3

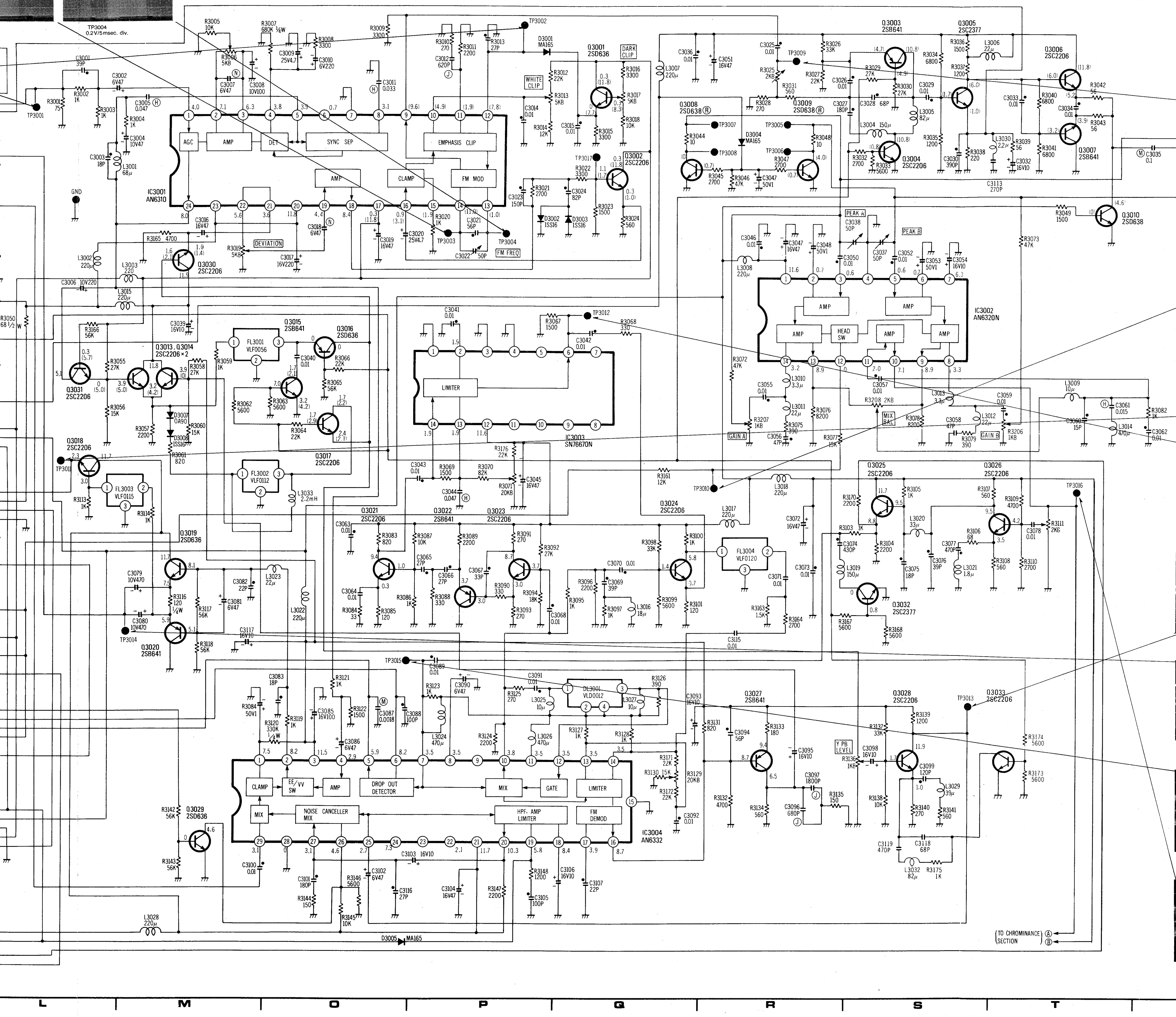

TP2004
TP2006
TP2005
TP2007
CAP. CUE FREE RUN R2200
CAP. CUE FREE RUN R2195
CYL. REV FREE RUN R2091
CTL. M.M. R2024
REC. SHIFT R2032
TP2003
CAP. FREE RUN R2197
CYL. FREE RUN R2094
CYL. CUE FREE RUN
TP2002
1/2 TRACKING R2125
CAP. 1/2 FREE RUN R2198
R2088
P.G. SHIFT R2029
P.G. SHIFT R2030
TP2001
TP2011
TP2010
R2127 TRCKING
R20 6 BUFFER OSC
TP2008
TP2009
TP2012

LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM

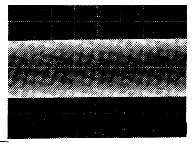

TP8001 Rec. mode 0.2V/20μsec. div.
TP8002 P.B. mode 0.5V/0.1μsec. div.
TP8003 Rec. mode 20mV/0.5μsec. div.
TP8004 Rec. mode 2V/20μsec. div.
TP8005 Rec. mode 50mV/20μsec. div.
TP8007 Rec. mode 0.5V/0.5μsec. div.
TP8008 Rec. mode 1V/0.5μsec. div.
TP8008 Rec. mode 1V/20μsec. div.
TP8009 Rec. mode 2V/20μsec. div.
TP3001 0.5V/20μsec. div.
TP3002 0.2V/20μsec. div.
TP3003 0.2V/5msec. div.
TP3004 0.2V/5msec. div.
IC8001 AN6360
IC8002 AN6352
IC8003 AN6362
IC8004 AN6371
IC8005 AN6551
IC3001 AN6310
IC3005 μPD4069C
Q8001 2SD636
Q8003 2SD636
Q8004 2SC2206
Q8005 2SD636
Q8006 2SC2206
Q8007 2SD636
Q8008 2SC2206B
Q8009 2SC2206B
Q8010 2SD636
Q8011 2SD636
Q3018 2SC2206
Q3019 2SD636
Q3020 2SB641
Q3029 2SD636
Q3030 2SC2206
Q3031 2SC2206
Q3013, Q3014 2SC2206×2
FL8001 VLF0113
FL8002 VLF0085
FL8003 VLF0094
FL8004 VLF0090
FL8005 VLF0095
FL3003 VLF0115
DL8001 VLD0014
X8001 VSX0066
X8002 VSX0069
DET
BURST GATE
ACC
B.M.
P.B. AMP
M.M.
GATE
SYNC SEP.
DOC 6W
P. COM.
VCO
1/4
90° ROTARY
ROTARY CONTROL
FSI
XTAL VCO
AMP
APC P. COM.
KILLER P. COM.
KILLER AMP
AGC
CHROMA PB MIX
CHROMA REC CUR
COMB BAL
REC KILLER
H FREQ
APC
AFC
P003 TO HEATER
1 HEATER (+) OUT
2 HEATER (−) OUT
P3008 TO POWER SECTION
1 HEATER (−) IN
2 HEATER (+) OUT
P3009 TO OUTPUT JACK SECTION
1 VIDEO IN
2 GND
3 VIDEO OUT
4 GND
5 AUDIO IN
6 GND
P3004 TO TUNER & DEMOD. SECTION
1 TUNER MODE (H) OUT
2
3 VIDEO IN
4 GND
5 AUDIO IN
P3006 TO TEST SIG. SW SECTION
7 +12V OUT
8 COLOR MODE SW ON 12V IN
9 TEST SIG ON 12V IN
10
P3007 TO POWER SECTION
1 GND
2 12V IN
P3001 TO TRANSPORT SECTION
1 REC PLAY 12V IN
2 CAMERA LED OUT
3 CAMERA PAUSE OUT
4 REC 12V IN
5 EXCEPT REC 12V IN
6 EE/VV SELECT IN
P3013 TO RF CONVERTER SECTION
1
2 VIDEO OUT
3 9V OUT
4 AUDIO OUT
5 GND
TO SERVO SECTION B
1 STILL ON PULSE OUT
2 STILL ADV (H) OUT
3 STILL SHORT 1/2H OUT
4 25Hz REF SIG. OUT
5 PAUSE RESET IN
TO SERVO SECTION A
1 VSS OUT
2 REC (H) OUT
3 TRACKING VR
4 SW PULSE IN
5 TRACKING VR
6 TRACKING MM IN
P3010 TO STILL SECTION
1 STILL V. SYNC IN
2 DOC CONTROL IN
3 DOC PULSE OUT
4 SW PULSE OUT
5 STILL SHORT 6H IN
6 STILL MOTOR DRIVE PULSE IN
7 STILL ON PULSE IN
8 STILL ON PULSE OUT
P3005 TO AUDIO SECTION
1 EE/VV SELECT OUT
2 EXCEPT REC 12V OUT
3 GND
4 REC 12V OUT
5 AUDIO IN
6 12V OUT
P3006 TO AUDIO SECTION
1 MIC OUT
2 GND
3 AUDIO OUT
4 GND
5 MIC AMP IN
6 GND
P3011 TO AUDIO SECTION
1 FM OUT
2 TRACKING SHIFTER
3 SW PULSE OUT
TO SERVO SECTION C
1 BURST OUT
2 2H DELAY INHIBIT
3 COLOUR (H)
4 SECAM FILTER
5 ROTARY INHIBIT
(FOR NV-7000EG)
Ⓐ Ⓑ (TO LUMINANCE SECTION)
CAMERA PAUSE
AUDIO
VIDEO
CAMERA LED
J3001 MIC CH2
J3002 AUDIO LINE IN CH1
J3003 VIDEO LINE IN
J3004 CAMERA PAUSE
TRACKING VR
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K
L
M



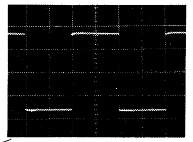
TP3004 0.2V/5msec. div.



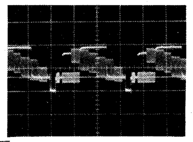
IC3001 AN6310
AGC
AMP
DET
SYNC SEP
EMPHASIS CLIP
AMP
CLAMP
FM MOD
DEVIATION
FM FREQ
WHITE CLIP
DARK CLIP
Q3001 2SD636
Q3002 2SC2206
Q3030 2SC2206
Q3031 2SC2206
Q3013, Q3014 2SC2206×2
Q3015 2SB641
Q3016 2SD636
Q3017 2SC2206
Q3018 2SC2206
Q3019 2SD636
Q3020 2SB641
Q3029 2SD636
FL3001 VLF0056
FL3002 VLF0112
FL3003 VLF0115
FL3004 VLF0120
IC3003 SN76670N
LIMITER
Q3021 2SC2206
Q3022 2SB641
Q3023 2SC2206
Q3024 2SC2206
Q3003 2SB641
Q3005 2SC2377
Q3006 2SC2206
Q3007 2SB641
Q3004 2SC2206
Q3008 2SD638
Q3009 2SD638
Q3010 2SD638
D3001 MA165
D3004 MA165
P002
1 VIDEO HEAD A (X)
2 VIDEO HEAD A (Y)
3 GND
4 GND
5 VIDEO HEAD B(X)
6 VIDEO HEAD B(Y)
IC3002 AN6320N
AMP
HEAD SW
PEAK A
PEAK B
GAIN A
GAIN B
MIX BAL
Q3025 2SC2206
Q3026 2SC2206
Q3032 2SC2377
IC3004 AN6332
CLAMP
EE/VV SW
AMP
DROP OUT DETECTOR
MIX
GATE
LIMITER
NOISE CANCELLER MIX
HPF· AMP LIMITER
FM DEMOD
DL3001 VLD0012
Q3027 2SB641
Q3028 2SC2206
Q3033 2SC2206
Y PB LEVEL
D3005 MA165
TO CHROMINANCE SECTION Ⓐ Ⓑ
TP3001
TP3002
TP3003
TP3004
TP3005
TP3006
TP3007
TP3008
TP3009
TP3010
TP3011
TP3012
TP3013
TP3014
TP3015
TP3016
TP3017
L
M
O
P
Q
R
S
T
U



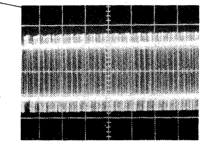
TP3009 0.5V/5msec. div.



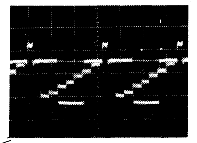
TP3010 P.B. mode 2V/10msec. div.



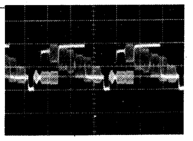
TP3011 Rec. mode 0.5V/20μsec. div.



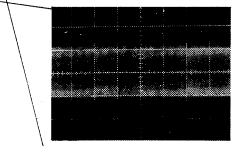
TP3012 P.B. mode 0.1V/0.5μsec. div.



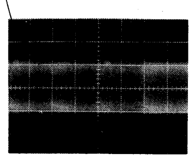
TP3013 P.B. mode 2V/20μsec. div.



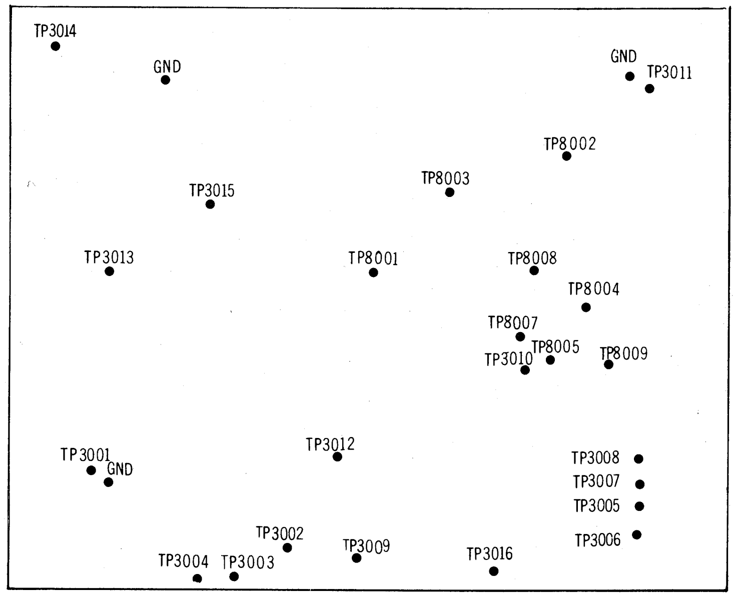
TP3014 P.B. mode 1V/20μsec. div.



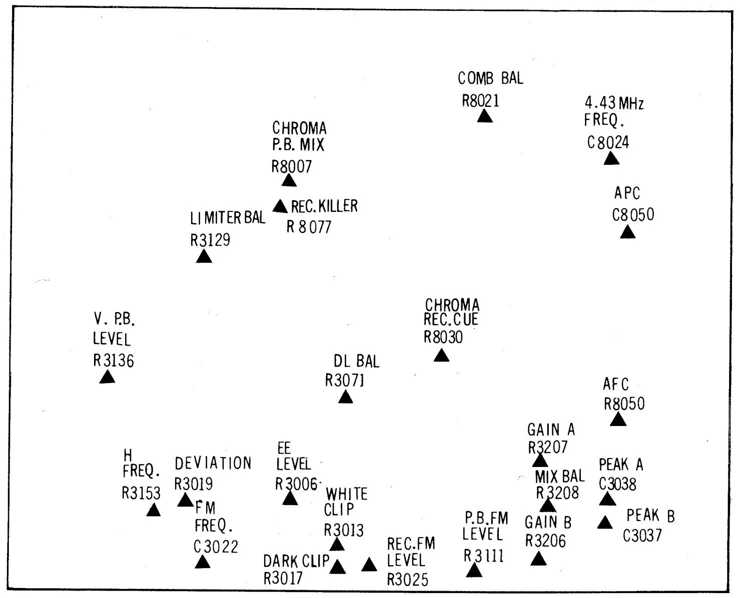
TP3015 P.B. mode 0.2V/5msec. div.



TP3016 P.B. mode 0.2V/5msec. div.

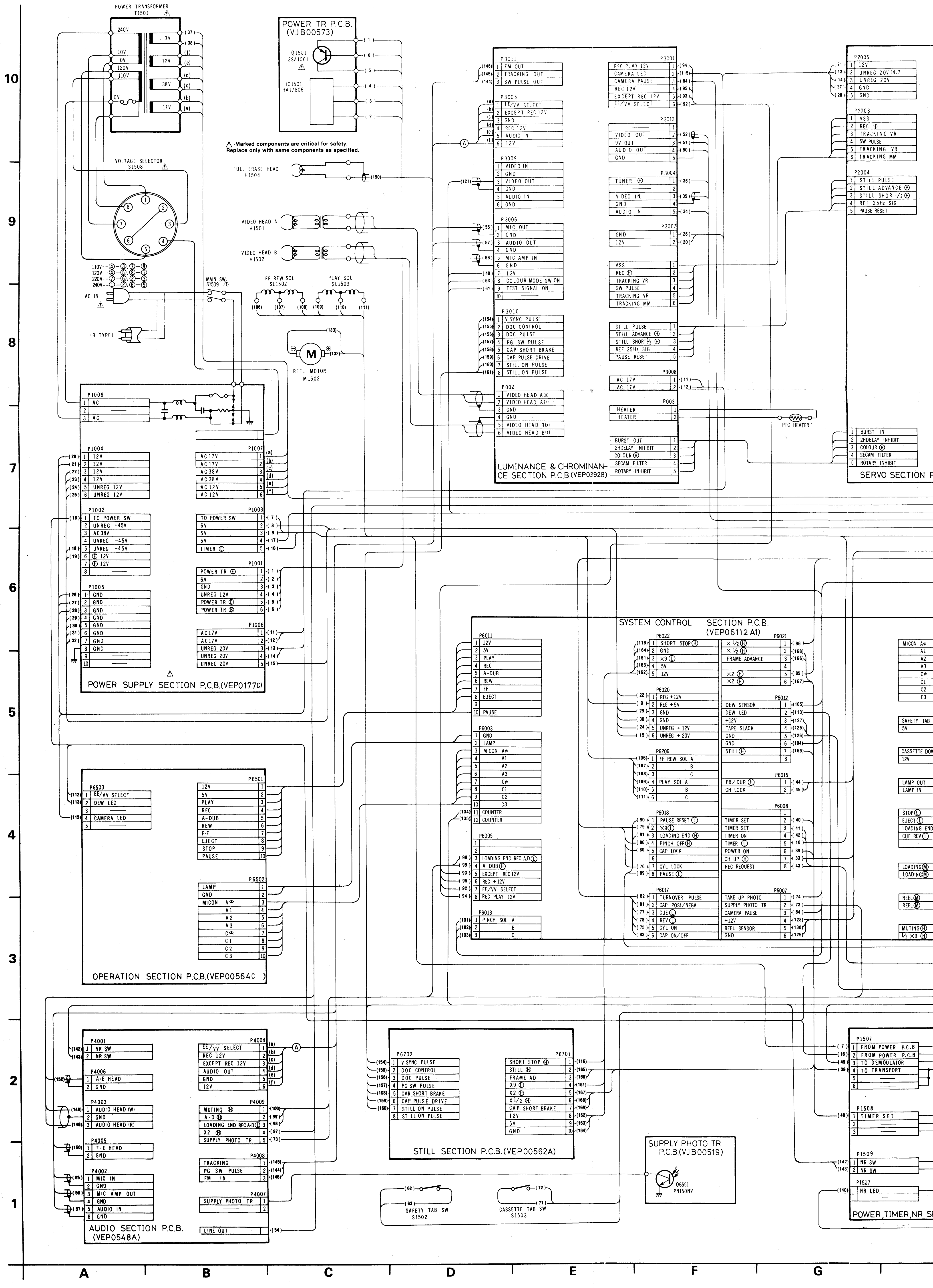


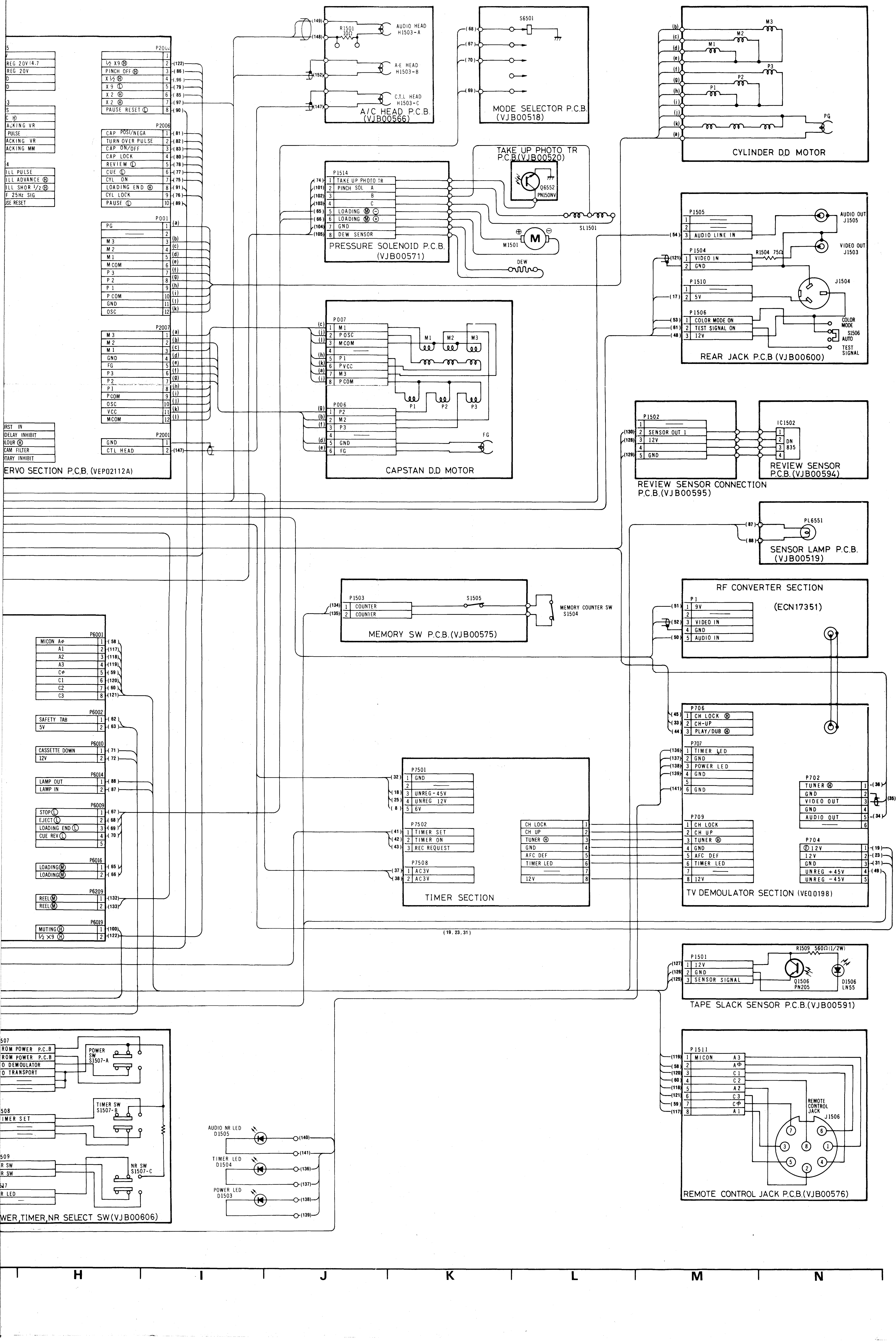
TP3014
GND
GND
TP3011
TP8002
TP3015
TP8003
TP3013
TP8001
TP8008
TP8004
TP8007
TP8005
TP3010
TP8009
TP3001
GND
TP3012
TP3008
TP3007
TP3005
TP3006
TP3002
TP3009
TP3004
TP3003
TP3016



COMB BAL R8021
4.43 MHz FREQ. C8024
CHROMA P.B. MIX R8007
APC C8050
LIMITER BAL R3129
REC. KILLER R 8077
V. P.B. LEVEL R3136
CHROMA REC. CUE R8030
DL BAL R3071
AFC R8050
GAIN A R3207
H FREQ. R3153
DEVIATION R3019
EE LEVEL R3006
MIX BAL R3208
PEAK A C3038
FM FREQ. C3022
WHITE CLIP R3013
P.B. FM LEVEL R3111
GAIN B R3206
PEAK B C3037
DARK CLIP R3017
REC. FM LEVEL R3025

INTERCONNECTION SCHEMATIC DIAGRAM

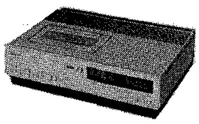

POWER TRANSFORMER T1501
240V
10V
0V
120V
110V
3V
12V
38V
17V
VOLTAGE SELECTOR S1508
110V
120V
220V
240V
AC IN
(B TYPE)
MAIN SW S1509
POWER TR P.C.B. (VJB00573)
Q1501 2SA1061
IC1501 HA17806
⚠-Marked components are critical for safety. Replace only with same components as specified.
FULL ERASE HEAD H1504
VIDEO HEAD A H1501
VIDEO HEAD B H1502
FF REW SOL SL1502
PLAY SOL SL1503
REEL MOTOR M1502
M
P1008
AC
P1004
12V
UNREG 12V
P1007
AC 17V
AC 38V
AC 12V
P1002
TO POWER SW
UNREG +45V
AC38V
UNREG -45V
Ⓕ 12V
P1003
6V
5V
TIMER Ⓛ
P1001
POWER TR Ⓔ
GND
UNREG 12V
POWER TR Ⓒ
POWER TR Ⓑ
P1005
P1006
UNREG 20V
POWER SUPPLY SECTION P.C.B.(VEP0177C)
P6503
EE/VV SELECT
DEW LED
CAMERA LED
P6501
PLAY
REC
A-DUB
REW
F·F
EJECT
STOP
PAUSE
P6502
LAMP
MICON AΦ
A1
A2
A3
CΦ
C1
C2
C3
OPERATION SECTION P.C.B.(VEP00564C)
P3011
FM OUT
TRACKING OUT
SW PULSE OUT
P3005
EXCEPT REC 12V
REC 12V
AUDIO IN
P3009
VIDEO IN
VIDEO OUT
P3006
MIC OUT
AUDIO OUT
MIC AMP IN
COLOUR MODE SW ON
TEST SIGNAL ON
P3010
V SYNC PULSE
DOC CONTROL
DOC PULSE
PG SW PULSE
CAP SHORT BRAKE
CAP PULSE DRIVE
STILL ON PULSE
P002
VIDEO HEAD A(x)
VIDEO HEAD A(Y)
VIDEO HEAD B(x)
VIDEO HEAD B(Y)
P3001
REC PLAY 12V
CAMERA LED
CAMERA PAUSE
P3013
9V OUT
P3004
TUNER Ⓗ
P3007
VSS
REC Ⓗ
TRACKING VR
SW PULSE
TRACKING MM
STILL PULSE
STILL ADVANCE Ⓗ
STILL SHORT½ Ⓗ
REF 25Hz SIG
PAUSE RESET
P3008
AC 17V
P003
HEATER
PTC HEATER
BURST OUT
2HDELAY INHIBIT
COLOUR Ⓗ
SECAM FILTER
ROTARY INHIBIT
LUMINANCE & CHROMINANCE SECTION P.C.B.(VEP0392B)
P2005
UNREG 20V(4.7
UNREG 20V
P2003
P2004
STILL SHOR ½ Ⓗ
BURST IN
SERVO SECTION P
SYSTEM CONTROL SECTION P.C.B. (VEP06112 A1)
P6011
P6003
COUNTER
P6005
LOADING END REC A.D Ⓛ
A-DUB Ⓗ
EXCEPT REC 12V
REC +12V
EE/VV SELECT
REC PLAY 12V
P6013
PINCH SOL A
P6022
SHORT STOP Ⓗ
X9 Ⓛ
P6021
X½ Ⓗ
FRAME ADVANCE
X2 Ⓗ
P6020
REG +12V
REG +5V
UNREG +12V
UNREG +20V
P6012
DEW SENSOR
DEW LED
TAPE SLACK
STILL Ⓗ
P6206
FF REW SOL A
PLAY SOL A
P6015
PB/DUB Ⓗ
CH LOCK
P6018
PAUSE RESET Ⓛ
LOADING END Ⓗ
PINCH OFF Ⓗ
CAP LOCK
CYL LOCK
PAUSE Ⓛ
P6008
TIMER SET
TIMER ON
TIMER Ⓛ
POWER ON
CH UP Ⓗ
REC REQUEST
P6017
TURNOVER PULSE
CAP POSI/NEGA
CUE Ⓛ
REV Ⓛ
CYL ON
CAP ON/OFF
P6007
TAKE UP PHOTO
SUPPLY PHOTO TR
CAMERA PAUSE
+12V
REEL SENSOR
MICON AΦ
SAFETY TAB
CASSETTE DOW
LAMP OUT
LAMP IN
STOP Ⓛ
EJECT Ⓛ
LOADING END
CUE REV Ⓛ
LOADING Ⓜ
REEL Ⓜ
MUTING Ⓗ
½ x9 Ⓗ
P4001
NR SW
P4006
A-E HEAD
P4003
AUDIO HEAD (W)
AUDIO HEAD (R)
P4005
F·E HEAD
P4002
MIC IN
MIC AMP OUT
AUDIO IN
AUDIO SECTION P.C.B. (VEP0548A)
P4004
AUDIO OUT
P4009
MUTING Ⓗ
A·D Ⓗ
LOADING END REC A·D Ⓛ
X2 Ⓗ
SUPPLY PHOTO TR
P4008
TRACKING
PG SW PULSE
FM IN
P4007
LINE OUT
P6702
P6701
STILL Ⓗ
FRAME AD
X9 Ⓛ
X½ Ⓗ
CAP. SHORT BRAKE
STILL SECTION P.C.B.(VEP00562A)
SUPPLY PHOTO TR P.C.B.(VJB00519)
Q6551 PN150NV
SAFETY TAB SW S1502
CASSETTE TAB SW S1503
P1507
FROM POWER P.C.B
TO DEMODULATOR
TO TRANSPORT
P1508
TIMER SET
P1509
P1547
NR LED
POWER,TIMER,NR S
1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G


A/C HEAD P.C.B. (VJB00566)
AUDIO HEAD H1503-A
A·E HEAD H1503-B
C.T.L HEAD H1503-C
R1501 10Ω
MODE SELECTOR P.C.B. (VJB00518)
S6501
CYLINDER D.D MOTOR
M1
M2
M3
P1
P2
P3
PG
TAKE UP PHOTO TR P.C.B.(VJB00520)
Q6552 PN150NV
PRESSURE SOLENOID P.C.B. (VJB00571)
P1514
TAKE UP PHOTO TR
PINCH SOL A
B
C
LOADING Ⓜ ⊖
LOADING Ⓜ ⊕
GND
DEW SENSOR
SL1501
M1501
DEW
REAR JACK P.C.B (VJB00600)
P1505
AUDIO LINE IN
AUDIO OUT J1505
VIDEO OUT J1503
P1504
VIDEO IN
R1504 75Ω
P1510
5V
J1504
P1506
COLOR MODE ON
TEST SIGNAL ON
12V
COLOR MODE
S1506 AUTO
TEST SIGNAL
CAPSTAN D.D MOTOR
P007
M1
P OSC
M COM
P1
P VCC
M3
P COM
P006
P2
M2
P3
GND
FG
REVIEW SENSOR CONNECTION P.C.B.(VJB00595)
P1502
SENSOR OUT 1
12V
GND
REVIEW SENSOR P.C.B.(VJB00594)
IC1502
DN 835
SENSOR LAMP P.C.B. (VJB00519)
PL6551
MEMORY SW P.C.B.(VJB00575)
P1503
COUNTER
S1505
MEMORY COUNTER SW S1504
RF CONVERTER SECTION
(ECN17351)
P1
9V
VIDEO IN
AUDIO IN
SERVO SECTION P.C.B. (VEP02112A)
P2004
½ X9 Ⓗ
PINCH OFF Ⓗ
X ½ Ⓗ
X 9 Ⓛ
X 2 Ⓗ
X 2 Ⓗ
PAUSE RESET Ⓛ
P2006
CAP POSI/NEGA
TURN OVER PULSE
CAP ON/OFF
CAP LOCK
REVIEW Ⓛ
CUE Ⓛ
CYL ON
LOADING END Ⓗ
CYL LOCK
PAUSE Ⓛ
P001
PG
M3
M2
M1
M COM
P3
P2
P1
P COM
GND
OSC
P2007
M3
M2
M1
GND
FG
P3
P2
P1
PCOM
OSC
VCC
MCOM
P2001
GND
CTL HEAD
P6001
MICON Aφ
A1
A2
A3
Cφ
C1
C2
C3
P6002
SAFETY TAB
5V
P6010
CASSETTE DOWN
12V
P6014
LAMP OUT
LAMP IN
P6009
STOP Ⓛ
EJECT Ⓛ
LOADING END Ⓛ
CUE REV Ⓛ
P6016
LOADING Ⓜ
LOADING Ⓜ
P6209
REEL Ⓜ
REEL Ⓜ
P6019
MUTING Ⓗ
½ X9 Ⓗ
TIMER SECTION
P7501
GND
UNREG -45V
UNREG 12V
6V
P7502
TIMER SET
TIMER ON
REC REQUEST
P7508
AC3V
AC3V
CH LOCK
CH UP
TUNER Ⓗ
GND
AFC DEF
TIMER LED
12V
(19, 23, 31)
TV DEMOULATOR SECTION (VEQ0198)
P706
CH LOCK Ⓗ
CH-UP
PLAY/DUB Ⓗ
P707
TIMER LED
GND
POWER LED
GND
GND
P709
CH LOCK
CH UP
TUNER Ⓗ
GND
AFC DEF
TIMER LED
12V
P702
TUNER Ⓗ
GND
VIDEO OUT
GND
AUDIO OUT
P704
Ⓗ 12V
12V
GND
UNREG +45V
UNREG -45V
TAPE SLACK SENSOR P.C.B.(VJB00591)
P1501
12V
GND
SENSOR SIGNAL
R1509 560Ω(1/2W)
Q1506 PN205
D1506 LN55
REMOTE CONTROL JACK P.C.B.(VJB00576)
P1511
MICON
A3
Aφ
C1
C2
A2
C3
Cφ
A1
REMOTE CONTROL JACK J1506
AUDIO NR LED D1505
TIMER LED D1504
POWER LED D1503
POWER,TIMER,NR SELECT SW(VJB00606)
FROM POWER P.C.B
FROM POWER P.C.B
TO DEMOULATOR
TO TRANSPORT
POWER SW S1507-A
TIMER SW S1507-B
TIMER SET
NR SW S1507-C
H
I
J
K
L
M
N

ELECTRICAL REPLACEMENT PARTS LIST

Model No. NV-7000-EG

Notes:
1. * Be sure to make your orders of replacement parts according to this list.
   * "Ⓝ" in Remarks column indicates new parts.
2. IMPORTANT SAFETY NOTICE
   Components identified by ⚠ have special characteristics important for safety. When replacing any of these components, use only the original ones.
3. Unless otherwise specified,
   All resistors are in OHMS (Ω), 1/8W ± 5% carbon. K=1,000Ω, M=1,000KΩ.
   All capacitors are in MICROFARADS (μF), ±10% P=μμF.



Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			SERVO CONTROL P.C. BOARD		
			Capacitors		
C2001		ECQM1H472KZ	Mylar 50V 0.0047	1	
C2002		ECEA1HS010	Electrolytic 50V 1	1	
C2003		ECQM1H103KZ	Mylar 50V 0.01	1	
C2004		ECQV05334JZW	Mylar 50V 0.33	1	
C2005		ECQV05683JZW	Mylar 50V 0.068	1	
C2006		ECQM1H224JZW	Tantalum 50V 0.22	1	
C2007,2008		ECEA1HS010	Electrolytic 50V 1	2	
C2009,2010		ECQM1H683KZ	Mylar 50V 0.068	2	
C2011		ECQM1H273KZ	Mylar 50V 0.027	1	
C2012,2013		ECQV05104JZW	Mylar 50V 0.1	2	
C2014		ECEA16Z100	Electrolytic 16V 100	1	
C2015		ECQM1H103KZ	Mylar 50V 0.01	1	
C2016		ECEA1CS100	Electrolytic 16V 10	1	
C2017		ECQM1H562KZ	Mylar 50V 0.0056	1	
C2018		ECEA50ZR68	Electrolytic 50V 0.68	1	
C2019-2021		ECEA50N1	Electrolytic 50V 1	3	
C2022		ECEA1CS101	Electrolytic 16V 100	1	
C2023		ECQM1H103KZ	Mylar 50V 0.01	1	
C2024		ECQM1H333KZ	Mylar 50V 0.033	1	
C2025		ECSF16E3R3	Tantalum 16V 3.3	1	
C2026		ECEA1ES470	Electrolytic 25V 47	1	
C2027		ECEA1CS100	Electrolytic 16V 10	1	
C2028		ECQM1H822KZ	Mylar 50V 0.0082	1	
C2029-2031		ECEA50ZR22	Electrolytic 50V 0.22	3	
C2032		ECEA50Z2R2	Electrolytic 50V 2.2	1	
C2033		ECKD1H103KB	Ceramic 50V 0.01	1	
C2034		ECQV05683JZW	Mylar 50V 0.068	1	
C2035		ECQV05184JZW	Mylar 50V 0.18	1	
C2036,2037		ECQV05104JZW	Mylar 50V 0.1	2	
C2038		ECQM1H683KZ	Mylar 50V 0.068	1	
C2039,2040		ECEA1CS470	Electrolytic 16V 47	2	
C2041		ECEA50ZR1	Electrolytic 50V 0.1	1	
C2042		ECEA1CS221	Electrolytic 16V 220	1	
C2043		ECQM1H223KZ	Mylar 50V 0.022	1	
C2044		ECQV05124JZW	Mylar 50V 0.12	1	
C2045		ECQV05274JZW	Mylar 50V 0.27	1	
C2046		ECQM1H333KZ	Mylar 50V 0.033	1	
C2047		ECEA1HS010	Electrolytic 50V 1	1	
C2048		ECQM1H333KZ	Mylar 50V 0.033	1	
C2049		ECQM1H103KZ	Mylar 50V 0.01	1	
C2051		ECQV05224JZW	Mylar 50V 0.22	1	
C2052		ECQM1H103KZ	Mylar 50V 0.01	1	
C2053		ECEA50ZR1	Electrolytic 50V 0.1	1	
C2054		ECEA1CS100	Electrolytic 16V 10	1	
C2055		ECKD1H103KB	Ceramic 50V 0.01	1	
C2056		ECEA50N1	Electrolytic 50V 1	1	
C2057		ECEA1HS010	Electrolytic 50V 1	1	
C2058		ECEA1CS100	Electrolytic 16V 10	1	
C2059		ECQV05104JZW	Mylar 50V 0.1	1	
C2060		ECQV05184JZW	Mylar 50V 0.18	1	
C2061		ECQM1H683KZ	Mylar 50V 0.068	1	
C2062		ECQM1H473KZ	Mylar 50V 0.047	1	
C2063		ECSF35ER33	Tantalum 35V 0.33	1	
C2064,2065		ECQV05104JZW	Mylar 50V 0.1	2	
C2066		ECEA10Z100	Electrolytic 10V 100	1	
C2068		ECEA50N1	Electrolytic 50V 1	1	
C2069,2070		ECEA50N1	Electrolytic 50V 1	2	
C2071		ECEA1VS101	Electrolytic 35V 100	1	
C2072		ECEA50ZR33	Electrolytic 50V 0.33	1	
C2073,2074		ECQM1H103KZ	Mylar 50V 0.01	2	
C2075		ECQV05104JZW	Mylar 50V 0.1	1	
C2076,2077		ECEA50ZR33	Electrolytic 50V 0.33	2	
C2078		ECEA1CS470	Electrolytic 16V 47	1	
C2079		ECEA1HS010	Electrolytic 50V 1	1	
C2080		ECQV05104JZW	Mylar 50V 0.1	1	
C2081		ECEA50Z2R2	Electrolytic 50V 2.2	1	
C2082		ECEA16Z47	Electrolytic 16V 47	1	
C2083		ECKD1H103KB	Ceramic 50V 0.01	1	
C2084,2085		ECEA16Z33	Electrolytic 16V 33	2	
C2087		ECEA0JS221	Electrolytic 6V. 220	1	
			Diodes		
D2001-2016		MA165		16	
D2020-2030		MA165		11	
D2032-2039		MA165		8	
D2040		RD5.1EB		1	
D2041		MA26W0		1	
D2042-2044		MA165		3	
D2046-2053		MA165		8	
D0255		MA165		1	
			ICs		
IC2001		AN6350		1	
IC2002		AN6677		1	
IC2003		AN6345		1	
IC2004		AN6341		1	
IC2005		AN640G		1	
IC2006		AN6345		1	
IC2007		UPD4528C		1	
IC2008		UPD4011C		1	
			Resistors		
R2001,2002		ERD10TJ104	100K	2	
R2003		ERD10TJ562	5.6K	1	
R2004		ERD10TJ104	100K	1	
R2005		ERD10TJ333	33K	1	
R2006		ERD10TJ104	100K	1	
R2007,2008		ERD10TJ683	68K	2	
R2009		ERD10TJ563	56K	1	
R2010		ERD10TJ183	18K	1	
R2011		ERD10TJ103	10K	1	
R2012		ERD10TJ153	15K	1	
R2013		ERD10TJ333	33K	1	
R2014		ERD10TJ332	3.3K	1	
R2015		ERD10TG1433	143K	1	
R2016		EVNK4A00B54	Variable 50K	1	
R2017		ERD10TJ184	180K	1	
R2018		ERD10TJ332	3.3K	1	
R2019		ERD10TJ473	47K	1	
R2020,2021		ERD10TJ333	33K	2	
R2022		ERD10TJ563	56K	1	
R2023		ERD10TJ153	15K	1	
R2024		EVNK6AA00B54	Variable 50K	1	
R2025		ERD10TJ124	120K	1	
R2026,2027		ERD25TJ105	1/4W 1M	2	
R2028		ERD10TJ682	6.8K	1	
R2029		EVNK6AA00B54	Variable 50K	1	
R2030		EVNK4A00B54	Variable 50K	1	
R2031		ERD10TJ682	6.8K	1	
R2032		EVNK4A00B15	Variable 100K	1	
R2033		ERD10TJ683	68K	1	
R2034		ERD10TJ123	12K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R2035		ERD25TG6802	±2% 1/4W 68K	1	
R2036		ERD10TJ332	3.3K	1	
R2037		ERD25TG4701	±2% 1/4W 4.7K	1	
R2038		ERD10TJ271	270	1	
R2039		ERD25TG2201	±2% 1/4W 2.2K	1	
R2040		ERD10TJ562	5.6K	1	
R2042		ERD10TJ473	47K	1	
R2043		ERD10TJ561	560	1	
R2044		ERD10TJ152	1.5K	1	
R2045		ERD10TJ273	27K	1	
R2046		ERD10TJ471	470	1	
R2047		ERD10TJ153	15K	1	
R2048		ERD10TJ104	100K	1	
R2049		ERD10TJ152	1.5K	1	
R2050		ERD10TJ123	12K	1	
R2051		ERD10TJ103	10K	1	
R2052		ERD25TG1803	±2% 1/4W 180K	1	
R2053		ERD10TJ104	100K	1	
R2054		ERD10TJ183	18K	1	
R2055		ERD10TJ332	3.3K	1	
R2056,2057		ERD10TJ563	56K	2	
R2058-2060		ERD25TJ470	47	3	
R2061		ERX12ANJR47	1/2W 0.47	1	
R2062		ERD10TJ124	120K	1	
R2063		ERD10TJ153	15K	1	
R2064		ERD10TJ272	2.7K	1	
R2065		ERD10TJ103	10K	1	
R2066		ERD10TJ683	68K	1	
R2067		ERD10TJ562	5.6K	1	
R2068		ERD10TJ104	100K	1	
R2069		ERD10TJ333	33K	1	
R2070		ERD10TJ683	68K	1	
R2071		ERD10TJ333	33K	1	
R2072		ERD10TJ104	100K	1	
R2073		ERD10TJ183	18K	1	
R2076		ERD10TJ474	470K	1	
R2078		ERD10TJ683	68K	1	
R2079		ERD10TJ333	33K	1	
R2080,2081		ERD10TJ104	100K	2	
R2082		ERD10TJ473	47K	1	
R2083		ERD10TJ563	56K	1	
R2086		ERD10TJ104	100K	1	
R2087		ERD10TJ683	68K	1	
R2088		EVNK6AA00B24	Variable 20K	1	
R2089		ERD10TJ333	33K	1	
R2091		EVNK6AA00B24	Variable 20K	1	
R2092		ERD10TJ333	33K	1	
R2094		EVNK6AA00B24	Variable 20K	1	
R2095		ERD10TJ333	33K	1	
R2096		ERD10TJ683	68K	1	
R2097		ERD10TJ333	33K	1	
R2098		ERD10TJ154	150K	1	
R2099		ERD10TJ104	100K	1	
R2100		ERD10TJ473	47K	1	
R2101,2102		ERD10TJ154	150K	2	
R2103,2104		ERD10TJ563	56K	2	
R2105		ERD10TJ683	68K	1	
R2106		ERD10TJ153	15K	1	
R2107		ERD10TJ154	150K	1	
R2108		ERD10TJ103	10K	1	
R2109		ERD10TJ683	68K	1	
R2110		ERD10TJ393	39K	1	
R2111		ERD10TJ563	56K	1	
R2113		ERD10TJ563	56K	1	
R2114		ERD10TJ102	1K	1	
R2115		ERD10TJ563	56K	1	
R2116		ERD10TJ393	39K	1	
R2117		ERD10TJ153	15K	1	
R2118		ERD10TJ103	10K	1	
R2119		ERD10TJ223	22K	1	
R2120		ERD10TJ222	2.2K	1	
R2121		ERD10TJ563	56K	1	
R2123		ERD10TJ333	33K	1	
R2124		ERD10TJ183	18K	1	
R2125		EVNK6AA00B25	Variable 200K	1	
R2126		ERD10TJ563	56K	1	
R2127		EVNK6AA00B15	Variable 100K	1	
R2128		ERD10TJ393	39K	1	
R2129		ERD10TJ563	56K	1	
R2130		ERD10TJ183	18K	1	
R2131		ERC14GJ685	1/4W 6.8M	1	
R2132		ERD25TG3901	±2% 1/4W 3.9K	1	
R2133		ERD25TG1801	±2% 1/4W 1.8K	1	
R2134,2135		ERD10TJ221	220	2	
R2136		ERD25TG1801	±2% 1/4W 1.8K	1	
R2137		ERD25TG8202	±2% 1/4W 82K	1	
R2138		ERD10TJ332	3.3K	1	
R2140		ERD25TG5602	±2% 1/4W 56K	1	
R2141		ERD10TJ563	56K	1	
R2142		ERD10TJ103	10K	1	
R2143-2145		ERG2ANJ151	2W 150	3	
R2146		ERD10TJ103	10K	1	
R2147		ERG2ANJ151	2W 150	1	
R2148		ERD10TJ391	390	1	
R2149		ERD10TJ103	10K	1	
R2150		ERG2ANJ820	2W 82	1	
R2151		ERG2ANJ151	2W 150	1	
R2152		ERD10TJ103	10K	1	
R2153		ERG2ANJ820	2W 82	1	
R2154		ERG2ANJ151	2W 150	1	
R2155		ERD10TJ103	10K	1	
R2156		ERG2ANJ820	2W 82	1	
R2157		ERD10TJ103	10K	1	
R2158		ERD10TJ392	3.9K	1	
R2159		ERD10TJ123	12K	1	
R2160		ERD10TJ332	3.3K	1	
R2161		ERD10TJ333	33K	1	
R2162		ERD10TJ683	68K	1	
R2163		ERD10TJ122	1.2K	1	
R2164		ERD10TJ103	10K	1	
R2165		ERD10TJ470	47	1	
R2166		ERD10TJ563	56K	1	
R2167		ERD10TJ103	10K	1	
R2168		ERD10TJ333	33K	1	
R2169		ERD10TJ103	10K	1	
R2170		ERD10TJ272	2.7K	1	
R2171		ERD10TJ333	33K	1	
R2172		ERD10TJ472	4.7K	1	
R2173		ERD10TJ102	1K	1	
R2174		ERD10TJ563	56K	1	
R2176		ERD10TJ102	1K	1	
R2177		ERD10TJ273	27K	1	
R2178		ERD10TJ392	3.9K	1	
R2179		ERD10TJ152	1.5K	1	
R2180		ERD10TJ122	1.2K	1	
R2181		ERD10TJ103	10K	1	
R2182		ERD10TJ122	1.2K	1	
R2183		ERD10TJ332	3.3K	1	
R2186		ERD10TJ104	100K	1	
R2187		ERD10TJ473	47K	1	
R2188		ERD10TJ153	15K	1	
R2189		ERD10TJ472	4.7K	1	
R2190		ERD10TJ682	6.8K	1	
R2191		ERD10TJ152	1.5K	1	
R2192		ERD10TJ102	1K	1	
R2193		ERD25TJ155	1.5M	1	
R2194		ERD10TJ333	33K	1	
R2195		EVNK6AA00B24	Variable 20K	1	
R2197,2198		EVNK6AA00B24	Variable 20K	2	
R2199		ERD10TJ393	39K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R2200		EVNK6AA00B24	Variable 20K	1	
R2202-2205		ERD10TJ333	33K	4	
R2206-2209		ERD10TJ154	150K	4	
R2210		ERD10TJ104	100K	1	
R2211		ERD10TJ333	33K	1	
R2212		ERD10TJ683	68K	1	
R2213		ERD10TJ333	33K	1	
R2214		ERD10TJ683	68K	1	
R2215		ERD10TJ333	33K	1	
R2218		ERD10TJ333	33K	1	
R2223		ERD10TJ391	390	1	
R2224		ERX1ANJR82	1W 0.82	1	
R2225-2227		ERD10TJ103	10K	3	
R2232		ERD25TJ105	1M	1	
R2233		ERD10TJ682	6.8K	1	
R2234		ERD10TJ472	4.2K	1	
			Connectors		
P001		VJP1147	12P	1	
P2001		VJP1141	2P	1	
P2002		VJP1145	8P	1	
P2003		VJP1144	6P	1	
P2004,2005		VJP1143	5P	2	
P2006		VJP1146	10P	1	
P2007		VJP1147	12P	1	
			Transistors		
Q2001-2003		2SD636		3	
Q2004		2SD889		1	
Q2005		2SD636		1	
Q2006		2SD889		1	
Q2007,2008		2SD636		2	
Q2009		2SB641		1	
R2010		2SD636		1	
Q2011		2SD889		1	
Q2012,2013		2SD636		2	
Q2015		2SB641		1	
Q2016-2018		2SD636		3	
Q2019		2SD389		1	
Q2020		2SB641		1	
Q2021		2SD636		1	
Q2022		2SB641		1	
Q2023		2SD636		1	
Q2024		2SB641		1	
Q2025-2029		2SD636		5	
Q2030		2SB641		1	
Q2032		2SD636		1	
Q2033		2SB641		1	
Q2034		2SD636		1	
Q2035		2SB641		1	
Q2036		2SD636		1	
Q2037		2SB641		1	
Q2038		2SD636		1	
Q2039		2SB641		1	
Q2040		2SD636		1	
Q2043		2SD636		1	
Q2045		2SB641		1	
Q2046,2047		2SD636		2	
Q2048		2SD636		1	
Q2049-2051		2SD636		3	
Q2052		2SB761		1	
Q2053		2SD856		1	
Q2054		2SB761		1	
Q2055		2SD856		1	
Q2056		2SB761		1	
Q2057		2SD856		1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			Miscellaneous		
		VMA3614	Fuse Mount Angle	1	
		XYN26+F6FX	Screw	1	
		VSC0514		1	
		XYN3+C8S	Screw	3	
		XTV3+8J	Screw	4	
F2001		EYP2AS129	Fuse	1	⚠
L2001		VLQ80W102	Coil	1	
			SYSTEM CONTROL		
			PRINTED CIRCUIT BOARD		
			Integrated Circuits		
IC6001		MN1405VK		1	
IC6002		MN1201A		1	
IC6003		UPD4049		1	
IC6004,6005		UPD4503		2	
IC6006		UPD4081		1	
IC6007		UPC177C		1	
IC6008		AN6552		1	
			Transistors		
Q6001-6005		2SD636		5	
Q6006		2SB641		1	
Q6007-6013		2SD636		7	
Q6014		2SB641		1	
Q6015,6016		2SD636		2	
Q6017		2SB819		1	
Q6018		2SD636		1	
Q6019		2SB819		1	
Q6020		2SD636		1	
Q6021		2SB819		1	
Q6022-6026		2SD636		5	
Q6027-6029		2SD837A		3	
Q6030		2SB644		1	
Q6031		2SD866		1	
Q6032		2SD636		1	
Q6033		2SD836		1	
Q6034		2SD636		1	
Q6035		2SB819		1	
Q6036		2SD1051		1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
Q6037		2SB819		1	
Q6038		2SD1051		1	
Q6039-6050		2SD636		12	
Q6052		2SD636		1	
Q6055,6056		2SD636		2	
Q6057		2SB641		1	
Q6058		2SD762		1	
Q6059		2SB819		1	
Q6060		2SD636		1	
Q6061,6062		2SB819		2	
Q6063,6064		2SD1051		2	
Q6065-6070		2SD636		6	
			Diodes		
D6001-6004		MA165		4	
D6006-6009		MA165		4	
D6010		10E1		1	
D6011		MA165		1	
D6013-6015		10E1		3	
D6016-6021		MA165		6	
D6022-6025		10E1		4	
D6026-6032		MA165		7	
D6033		MA150		1	
D6034-6040		MA165		7	
R6042-6054		MA165		13	
D6056,6065		MA165		10	
D6068		MA165		1	
D6071		10E1		1	
D6074		MA165		1	
D6076		MA165		1	
D6080-6085		MA165		6	
D6086		MA165		1	
D6087		MA165		1	
D6088		MA165		1	
			Resistors		
R6004		ERD10TJ103	10K	1	
R6005		EVNK4AA00B24	Variable 20K	1	
R6006		ERD10TJ222	2.2K	1	
R6007		ERD10TJ224	220K	1	
R6011		ERD10TJ153	15K	1	
R6012		ERD10TJ104	100K	1	
R6013		ERD10TJ333	33K	1	
R6014-6016		ERD10TJ223	22K	3	
R6017		ERD10TJ333	33K	1	
R6019		ERD10TJ223	22K	1	
R6020		ERD10TJ104	100K	1	
R6021		ERD10TJ823	82K	1	
R6022		ERD10TJ104	100K	1	
R6023,6024		ERD10TJ563	56K	2	
R6025		ERD10TJ184	180K	1	
R6026		ERD10TJ124	120K	1	
R6027,6028		ERD10TJ103	10K	2	
R6030		ERD10TJ152	1.5K	1	
R6031		ERD10TJ224	220K	1	
R6032,6033		ERD10TJ103	10K	2	
R6034		ERG1ANJ620H	1W 62	1	
R6035,6036		ERD10TJ563	56K	2	
R6037		ERD10TJ333	33K	1	
R6038		ERD10TJ473	47K	1	
R6039		ERD10TJ103	10K	1	
R6040-6042		ERD10TJ333	33K	3	
R6043		ERD10TJ104	100K	1	
R6044		ERD10TJ154	150K	1	
R6045,6046		ERD10TJ223	22K	2	
R6047		ERD10TJ680	68	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R6048		ERD10TJ393	39K	1	
R6049		ERD10TJ561	560	1	
R6050		ERD10TJ272	2.7K	1	
R6051		ERD10TJ561	560	1	
R6052		ERD10TJ152	1.5K	1	
R6053		ERD10TJ221	220	1	
R6054-6056		ERD10TJ224	220K	3	
R6057		ERD10TJ103	10K	1	
R6058,6059		ERD10TJ223	22K	2	
R6060		ERD10TJ273	27K	1	
R6061,6062		ERD10TJ563	56K	2	
R6063		ERD10TJ472	4.7K	1	
R6064		ERD10TJ102	1K	1	
R6065		ERD10TJ272	2.7K	1	
R6066		ERD10TJ473	47K	1	
R6067		ERD10TJ472	4.7K	1	
R6068		ERD10TJ152	1.5K	1	
R6069,6070		ERD10TJ103	10K	2	
R6071,6072		ERD10TJ223	22K	2	
R6073		ERD10TJ152	1.5K	1	
R6074,6075		ERD10TJ103	10K	2	
R6076		ERD10TJ153	15K	1	
R6077		ERD10TJ223	22K	1	
R6078		ERD10TJ152	1.5K	1	
R6079		ERD10TJ103	10K	1	
R6080-6082		ERD10TJ223	22K	3	
R6083		ERD10TJ103	10K	1	
R6085		ERD10TJ103	10K	1	
R6086,6087		ERD10TJ124	120K	2	
R6088-6091		ERD10TJ103	10K	4	
R6092		ERD10TJ122	1.2K	1	
R6093,6094		ERD10TJ103	10K	2	
R6095		ERD10TJ122	1.2K	1	
R6096		ERD10TJ562	5.6K	1	
R6097		ERD10TJ103	10K	1	
R6098		ERD10TJ122	1.2K	1	
R6100-6102		ERD10TJ272	2.7K	3	
R6103		ERD10TJ681	680	1	
R6104,6105		ERD10TJ333	33K	2	
R6106		ERD10TJ103	10K	1	
R6107		ERD10TJ821	820	1	
R6108		ERD10TJ821	820	1	
R6109		ERD10TJ272	2.7K	1	
R6110		ERD10TJ223	22K	1	
R6111		ERD10TJ103	10K	1	
R6112,6113		ERD10TJ102	1K	2	
R6114,6115		ERD25TJ471	1/4W 470	2	
R6116,6117		ERD10TJ102	1K	2	
R6118		ERD10TJ103	10K	1	
R6119,6120		ERD10TJ223	22K	2	
R6121		ERD10TJ223	22K	1	
R6122		ERD10TJ103	10K	1	
R6123		ERD10TJ103	10K	1	
R6124		ERD10TJ152	1.5K	1	
R6125,6126		ERD10TJ104	100K	2	
R6127		ERD10TJ682	6.8K	1	
R6128		ERD10TJ821	820	1	
R6129		ERD10TJ223	22K	1	
R6130		ERD10TJ103	10K	1	
R6131		ERD10TJ333	33K	1	
R6132		ERD10TJ472	4.7K	1	
R6133-6135		ERD10TJ683	68K	3	
R6136		ERD10TJ272	2.7K	1	
R6138,6139		ERD10TJ103	10K	2	
R6141-6143		ERD10TJ333	33K	3	
R6144-6146		ERD10TJ563	56K	3	
R6147,6148		ERD10TJ104	100K	2	
R6149		ERD10TJ563	56K	1	
R6150		ERD10TJ682	6.8K	1	
R6151		ERD10TJ563	56K	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
R6152	ERD10TJ104	100K	1	
R6153	ERD10TJ223	22K	1	
R6154-6156	ERD10TJ473	47K	3	
R6157,6158	ERD10TJ224	220K	2	
R6159,6160	ERD10TJ103	10K	2	
R6161	ERD10TJ104	100K	1	
R6162	ERD10TJ561	560	1	
R6163,6164	ERD10TJ224	220K	2	
R6165,6166	ERD10TJ333	33K	2	
R6167,6168	ERD10TJ224	220K	2	
R6169	ERD10TJ103	10K	1	
R6170	ERD10TJ823	82K	1	
R6171	ERD10TJ562	5.6K	1	
R6172	ERD10TJ272	2.7K	1	
R6173	ERD10TJ153	15K	1	
R6174	ERD10TJ333	33K	1	
R6175	ERD10TJ153	15K	1	
R6176	ERD10TJ102	1K	1	
R6178	ERD10TJ562	5.6K	1	
R6179,6180	ERD10TJ563	56K	2	
R6181	ERD10TJ562	5.6K	1	
R6184	ERD10TJ103	10K	1	
R6191	ERD10TJ563	56K	1	
R6192	ERD10TJ103	10K	1	
R6194	ERD10TJ332	3.3K	1	
R6195	ERD10TJ333	33K	1	
R6196	ERD10TJ684	680K	1	
R6197,6198	ERD10TJ224	220K	2	
R6199	ERD10TJ684	680K	1	
R6200	ERD10TJ222	2.2K	1	
R6201	ERX1AJR82H	1W 0.82	1	
R6202	ERD10TJ103	10K	1	
R6203	ERG2ANJP120	2W 12	1	
R6204	ERD10TJ102	1K	1	
R6205,6206	ERD10TJ223	22K	2	
R6207,6208	ERD10TJ103	10K	2	
R6209,6210	ERD10TJ102	1K	2	
R6211,6212	ERD50TJ471	1/4W 470	2	
R6213,6214	ERD10TJ102	1K	2	
R6215,6216	ERD10TJ103	10K	2	
R6217	ERD10TJ563	56K	1	
R6218	ERD10TJ104	100K	1	
R6219	ERD10TJ563	56K	1	
R6221	ERD10TJ122	1.2K	1	
R6222	ERD10TJ473	47K	1	
R6223	ERD10TJ104	100K	1	
R6224	ERD10TJ392	3.9K	1	
R6225	ERD10TJ103	10K	1	
R6226	ERD10TJ124	120K	1	
R6227	ERD10TJ224	220K	1	
R6228	ERD10TJ392	3.9K	1	
R6229	ERD10TJ562	5.6K	1	
R6230	ERD10TJ334	330K	1	
R6231	ERD10TJ274	270K	1	
R6232	ERD10TJ563	56K	1	
R6233	ERD10TJ224	220K	1	
R6234	ERD10TJ103	10K	1	
		Capacitors		
C6001	ECCW1H101KC	Ceramic 50V 100P	1	
C6002	ECKW1H103PF	Ceramic 50V 0.01	1	
C6003	ECEA1AS470	Electrolytic 10V 47	1	
C6004	ECEA1CS101	Electrolytic 16V 100	1	
C6005	ECEA25Z3R3	Electrolytic 25V 3.3	1	
C6006-6008	ECEA1HS470	Electrolytic 50V 47	3	
C6009,6010	ECQV05104JZW	Electrolytic 50V 0.1	2	
C6011-6013	ECEA1HS010	Electrolytic 50V 1	3	
C6014,6015	ECKW1H103PF	Ceramic 50V 0.01	2	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
C6016	ECEA1AS101	Electrolytic 10V 100	1	
C6017	ECEA1AS101	Electrolytic 10V 100	1	
C6018	ECEA1AS470	Electrolytic 16V 47	1	
C6019	ECEA25Z4R7	Electrolytic 25V 4.7	1	
C6020	ECEA50ZR47	Electrolytic 50V 0.4	1	
C6021	ECEA50ZR68	Electrolytic 50V 0.68	1	
C6022,6023	ECEA1HS010	Electrolytic 50V 1	2	
C6024,6025	ECKW1H103PF	Ceramic 50V 0.01	2	
C6026,6027	ECEA1HS010	Electrolytic 50V 1	2	
C6028	ECEA1AS101	Electrolytic 10V 100	1	
C6029	ECEA1HS010	Electrolytic 50V 1	1	
C6030	ECEA50ZR1	Electrolytic 50V 0.1	1	
C6031	ECEA25Z4R7	Electrolytic 25V 4.7	1	
C6033	ECEA16Z10	Electrolytic 16V 10	1	
C6034	ECKD1H103ZF	Ceramic 50V 0.01	1	
		Connectors		
P6001	VJP1145	8P	1	
P6002	VJP1141	2P	1	
P6003	VJP1147	12P	1	
P6005	VJP1145	8P	1	
P6007	VJP1144	6P	1	
P6008	VJP1145	8P	1	
P6009	VJP1143	5P	1	
P6010	VJP1141	2P	1	
P6011	VJP1146	10P	1	
P6012	VJP1145	8P	1	
P6013	VJP1142	3P	1	
P6014-6016	VJP1141	2P	3	
P6017	VJP1144	6P	1	
P6018	VJP1145	8P	1	
P6019	VJP1141	2P	1	
P6020,6021	VJP1144	6P	2	
P6022	VJP1143	5P	1	
P6206	VJP1144	6P	1	
P6209	VJP1141	2P	1	
		Complex Component (R)		
RX6001	EXBP84103K		1	
RX6002	EXBP84332K		1	
RX6003	EXBP88223K		1	
RX6004	EXBP86103K		1	
RX6005	EXBP84332K		1	
RX6006	EXBP89223K		1	
		Miscellaneous		
	VSC0520	Shield Board	1	
	VMA4219	Angle	1	
	XYN3+C8S	Screw	3	
	XTV3+8F	Screw	2	
	XTV3+8J	Screw	2	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			VIDEO COLOUR PRINTED		
			CIRCUIT BOARD (Video Section)		
			Integrated Circuits		
IC3001		AN6310	Video Rec	1	
IC3002		AN6320N	Head Amp	1	
IC3003		SN76670N	Double Limitter	1	
IC3004		AN6332	Video Playback	1	
IC3005		μPD4069C	Inverter	1	
			Transistors		
Q3001		2SD636		1	
Q3002		2SC2206		1	
Q3003		2SB641		1	
Q3004		2SC2206		1	
Q3005		2SC2377		1	
Q3006		2SC2206		1	
Q3007		2SB641		1	
Q3008,3009		2SD638	AF AmP	2	
Q3010		2SD638		1	
Q3013,3014		2SC2206		2	
Q3015		2SB641		1	
Q3016		2SD636		1	
Q3017,3018		2SC2206		2	
Q3019		2SD636		1	
Q3020		2SB641		1	
Q3021		2SC2206		1	
Q3022		2SB641		1	
Q3023-3026		2SC2206		4	
Q3027		2SB641		1	
Q3028		2SC2206		1	
Q3029		2SD636		1	
Q3030,3031		2SC2206		2	
Q3032		2SC2377		1	
Q3033		2SC2206		1	
			Diodes		
D3001		MA165		1	
D3002,3003		1SS16		2	
D3004,3005		MA165		2	
D3006		MA165		1	
			Resistors		
R3001		ERD10TJ750	75	1	
R3002-3004		ERD10TJ102	1K	3	
R3005		ERD10TJ103	10K	1	
R3006		EVNK6AA00B53	Variable 5K	1	
R3007		ERD25TJ684	680K	1	
R3008,3009		ERD10TJ332	3.3K	2	
R30I0		ERD10TJ271	270	1	
R3011		ERD10TJ222	2.2K	1	
R3012		ERD10TJ223	22K	1	
R3013		EVNK6AA00B53	Variable 5K	1	
R3014		ERD10TJ123	12K	1	
R3015,3016		ERD10TJ332	3.3K	2	
R3017		EVNK6AA00B53	Variable 5K	1	
R3018		ERD10TJ103	10K	1	
R3019		EVNK6AA00B53	Variable 5K	1	
R3020		ERD10TJ102	1K	1	
R3021		ERD10TJ272	2.7K	1	
R3022		ERD10TJ332	3.3K	1	
R3023		ERD10TJ152	1.5K	1	
R3024		ERD10TJ561	560	1	
R3025		EVNK6AA00B23	Variable 2K	1	
R3026		ERD10TJ333	33K	1	
R3027		ERD10TJ223	22K	1	
R3028		ERD10TJ271	270	1	
R3029,3030		ERD10TJ273	27K	2	
R3031		ERD10TJ561	560	1	
R3032		ERD10TJ272	2.7K	1	
R3033		ERD10TJ562	5.6K	1	
R3034		ERD10TJ682	6.8K	1	
R3035		ERD10TJ122	1.2K	1	
R3036		ERD10TJ152	1.5K	1	
R3037		ERD10TJ122	1.2K	1	
R3038		ERD10TJ221	220	1	
R3039		ERD10TJ560	56	1	
R3040,3041		ERD10TJ682	6.8K	2	
R3042,3043		ERD10TJ560	56	2	
R3044		ERD10TJ100	10	1	
R3045		ERD10TJ272	2.7K	1	
R3046		ERD10TJ473	47K	1	
R3047		ERD10TJ272	2.7K	1	
R3048		ERD10TJ100	10	1	
R3049		ERD10TJ152	1.5K	1	
R3050		ERD12FJ680	1/2W 68	1	
R3052		ERD10TJ471	470	1	
R3055		ERD10TJ273	27K	1	
R3056		ERD10TJ153	15K	1	
R3057		ERD10TJ222	2.2K	1	
R3058		ERD10TJ273	27K	1	
R3059		ERD10TJ102	1K	1	
R3060		ERD10TJ153	15K	1	
R3061		ERD10TJ102	1K	1	
R3062,3063		ERD10TJ562	5.6K	2	
R3064		ERD10TJ223	22K	1	
R3065		ERD10TJ563	56K	1	
R3066		ERD10TJ223	22K	1	
R3067		ERD10TJ152	1.5K	1	
R3068		ERD10TJ331	330	1	
R3069		ERD10TJ152	1.5K	1	
R3070		ERD10TJ823	82K	1	
R3071		EVNK6AA00B24	Variable 20K	1	
R3072,3073		ERD10TJ473	47K	2	
R3075		ERD10TJ391	390	1	
R3076		ERD10TJ822	8.2K	1	
R3077		ERD10TJ153	15K	1	
R3078		ERD10TJ822	82.K	1	
R3079		ERD10TJ391	390	1	
R3082		ERD10TJ102	1k	1	
R3083		ERD10TJ821	820	1	
R3084		ERD10TJ330	33	1	
R3085		ERD10TJ121	120	1	
R3086		ERD10TJ102	1K	1	
R3087		ERD10TJ103	10K	1	
R3088		ERD10TJ331	330	1	
R3089		ERD10TJ222	2.2K	1	
R3090		ERD10TJ331	330	1	
R3091		ERD10TJ271	270	1	
R3092		ERD10TJ273	27K	1	
R3093		ERD10TJ271	270	1	
R3094		ERD10TJ183	18K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R3095		ERD10TJ102	1K	1	
R3096		ERD10TJ222	2.2K	1	
R3097		ERD10TJ102	1K	1	
R3098		ERD10TJ333	33K	1	
R3099		ERD10TJ562	5.6K	1	
R3100		ERD10TJ102	1K	1	
R3101		ERD10TJ121	120	1	
R3103		ERD10TJ102	1K	1	
R3104		ERD10TJ222	2.2K	1	
R3105		ERD10TJ102	1K	1	
R3106		ERD10TJ680	68	1	
R3107,3108		ERD10TJ561	560	2	
R3109		ERD10TJ472	4.7K	1	
R3110		ERD10TJ272	2.7K	1	
R3111		EVNK6AA00B23	Variable 2K	1	
R3113,3114		ERD10TJ102	1K	2	
R3116		ERD25TJ121	1/4W 120	1	
R3117,3118		ERD10TJ563	56K	2	
R3119		ERD10TJ102	1K	1	
R3120		ERD25TJ334	1/4W 330K	1	
R3121		ERD10TJ102	1K	1	
R3122		ERD10TJ152	1.5K	1	
R3123		ERD10TJ102	1K	1	
R3124		ERD10TJ222	2.2K	1	
R3125		ERD10TJ271	270	1	
R3126		ERD10TJ391	390	1	
R3127,3128		ERD10TJ102	1K	2	
R3129		EVNK6AA00B24	Variable 20K	1	
R3130		ERD10TJ153	15K	1	
R3131		ERD10TJ821	820	1	
R3132		ERD10TJ472	4.7K	1	
R3133		ERD10TJ181	180	1	
R3134		ERD10TJ561	560	1	
R3135		ERD10TJ151	150	1	
R3136		EVNK6AA00B13	Variable 1K	1	
R3137		ERD10TJ333	33K	1	
R3138		ERD10TJ103	10K	1	
R3139		ERD10TJ122	1.2K	1	
R3140		ERD10TJ271	270	1	
R3141		ERD10TJ561	560	1	
R3142,3143		ERD10TJ563	56K	2	
R3144		ERD10TJ151	150	1	
R3145		ERD10TJ103	10K	1	
R3146		ERD10TJ562	5.6K	1	
R3147		ERD10TJ222	2.2K	1	
R3148		ERD10TJ122	1.2K	1	
R3149		ERD10TJ822	8.2K	1	
R3150		ERD10TJ183	18K	1	
R3152		ERD10TJ122	1.2K	1	
R3151		ERD10TJ563	56K	1	
R3153		EVNK6AA00B24	Variable 20K	1	
R3154		ERD25TJ125	1/4W 1.2M	1	
R3155,3156		ERD10TJ682	6.8K	2	
R3157		EVJLEA312B15	100K	1	
R3158		ERD10TJ822	8.2K	1	
R3159		ERD10TJ563	56K	1	
R3160		ERD25TJ102	1/4W 1K	1	
R3161		ERD10TJ123	12K	1	
R3163		ERD10TJ152	1.5K	1	
R3164		ERD10TJ272	2.7K	1	
R3165		ERD10TJ472	4.7K	1	
R3166		ERD10TJ563	56K	1	
R3167,3168		ERD10TJ562	5.6K	2	
R3169		ERD10TJ333	33K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R3170		ERD10TJ222	2.2K	1	
R3171,3172		ERD10TJ223	22K	2	
R3173,3174		ERD10TJ562	5.6K	2	
R3175		ERD10TJ102	1K	1	
R3176		ERD10TJ223	22K	1	
R3206,3207		EVNK6AA00B13	Variable 1K	2	
R3208		EVNK6AA00B23	Variable 2K	1	
			Capacitors		
C3001		ECCW1H390KC	Ceramic 50V 39P	1	
C3002		ECEA0JS470	Electrolytic 6.3V 47	1	
C3003		ECCW1H180KC	Ceramic 50V 18P	1	
C3004		ECEA1AS470	Electrolytic 10V 47	1	
C3005		EVY25473KX	Semiconductor 25V 0.047	1	
C3006		ECEA1AS221	Electrolytic 10V 220	1	
C3007		ECEA6N47	Electrolytic 6V 47	1	
C3008		ECEA1AS101	Electrolytic 10V 100	1	
C3009		ECEA1ES4R7	Electrolytic 25V 4.7	1	
C3010		ECEA0JS221	Electrolytic 6.3V 220	1	
C3011		VCY25333KX	Semiconductor 25V 0.033	1	
C3012		VCKW1H621SA	Ceramic 50V 620P	1	
C3013		ECCW1H270KC	Ceramic 50V 27P	1	
C3015		ECKW1H103PF	Ceramic 50V 0.01	1	
C3016		ECEA1AS470	Electrolytic 10V 47	1	
C3017		ECEA1CS221	Electrolytic 16V 220	1	
C3018		ECCEA6N47	Electrolytic 6V 47	1	
C3019		ECEA1CS470	Electrolytic 16V 47	1	
C3020		ECEA1ES4R7	Electrolytic 25V 4.7	1	
C3021		ECCW1H560KC	Ceramic 50V 56P	1	
C3022		ECV1ZW50X44	Trimmer 1W 50P	1	
C3023		ECKW1H151KB	Ceramic 50V 150P	1	
C3024		ECCW1H820KC	Ceramic 50V 82P	1	
C3025,3026		ECKW1H103PF	Ceramic 50V 0.01	2	
C3027		ECKW1H181KB	Ceramic 50V 180P	1	
C3028		ECCW1H680KC	Ceramic 50V 68P	1	
C3029		ECKW1H103PF	Ceramic 50V 0.01	1	
C3030		ECKW1H391KB	Ceramic 50V 390P	1	
C3032		ECEA1CS100	Electrolytic 16V 10	1	
C3033,3034		ECKW1H103PF	Ceramic 50V 0.01	2	
C3035		ECQV05104JZW	Mylar 50V 0.1	1	
C3036		ECKW1H103PF	Ceramic 50V 0.01	1	
C3037,3038		ECV1ZW50X44	Trimmer 1W 50P	2	
C3039		ECEA1CS100	Electrolytic 16V 10	1	
C3040-3043		ECKW1H103PF	Ceramic 50V 0.01	4	
C3044		VCY25473KX	Semiconductor 25V 0.047	1	
C3045		ECEA1CS470	Electrolytic 16V 47	1	
C3046		ECKW1H103PF	Ceramic 50V 0.01	1	
C3047		ECEA1CS470	Electrolytic 16V 47	1	
C3048		ECEA1HS010	Electrolytic 50V 1	1	
C3050		ECKW1H103PF	Ceramic 50V 0.01	1	
C3051		ECEA1CS470	Electrolytic 16V 47	1	
C3052		ECKW1H103PF	Ceramic 50V 0.01	1	
C3053		ECEA1HS010	Electrolytic 50V 1	1	
C3054		ECEA1CS100	Electrolytic 16V 10	1	
C3055		ECKW1H103PF	Ceramic 50V 0.01	1	
C3056		ECCW1H470KC	Ceramic 50V 47P	1	
C3057		ECKW1H103PF	Ceramic 50V 0.01	1	
C3058		ECCW1H470KC	Ceramic 50V 47P	1	
C3059		ECKW1H103PF	Ceramic 50V 0.01	1	
C3060		ECCW1H150KC	Ceramic 50V 15P	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C3061		VCY25153KX	Semiconductor 25V 0.015	1	
C3062-3064		ECKW1H103PF	Ceramic 50V 0.01	3	
C3065,3066		ECCW1H270KC	Ceramic 50V 27P	2	
C3067		ECCW1H330KC	Ceramic 50V 33P	1	
C3068		ECKW1H103PF	Ceramic 50V 0.01	1	
C3069		ECCW1H390KC	Ceramic 50V 39P	1	
C3070,3071		ECKW1H103PF	Ceramic 50V 0.01	2	
C3072		ECEA1CS470	Electrolytic 16V 47	1	
C3073		ECKW1H103PF	Ceramic 50V 0.01	1	
C3074		VCKW1H431JSA	Ceramic 50V 430P	1	
C3075		ECCW1H180KC	Ceramic 50V 18P	1	
C3076		ECCW1H390KC	Ceramic 50V 39P	1	
C3077		ECKW1H471KB	Ceramic 50V 470P	1	
C3078		ECKW1H103PF	Ceramic 50V 0.01	1	
C3079		ECEA1AS471	Electrolytic 10V 470	1	
C3080		ECEA1AS471	Electrolytic 10V 470	1	
C3081		ECEA0JS470	Electrolytic 6.3V 47	1	
C3082		ECCW1H220KC	Ceramic 50V 22P	1	
C3083		ECCW1H180KC	Ceramic 50V 18P	1	
C3084		ECEA1HS010	Electrolytic 50V 1	1	
C3085		ECEA1CS101	Electrolytic 16V 100	1	
C3086		ECEA0JS470	Electrolytic 6.3V 47	1	
C3087		VCY25182KX	Semiconductor 25V 0.0018	1	
C3088		ECKW1H101KB	Ceramic 50V 100P	1	
C3089		ECKW1H103PF	Ceramic 50V 0.01	1	
C3090		ECEA0JS470	Electrolytic 6.3V 47	1	
C3091,3092		ECKW1H103PF	Ceramic 50V 0.01	2	
C3093		ECEA1CS100	Electrolytic 16V 10	1	
C3094		ECCW1H560KC	Ceramic 50V 56P	1	
C3095		ECEA1CS100	Electrolytic 16V 10	1	
C3096		VCKW1H681JSA	Ceramic 50V 680P	1	
C3097		VCKW1H182JSA	Ceramic 50V 0.0018	1	
C3098		ECEA1CS100	Electrolytic 16V 10	1	
C3099		ECKW1H121KB	Ceramic 50V 120P	1	
C3100		ECKW1H103PF	Ceramic 50V 0.01	1	
C3101		ECKW1H181KB	Ceramic 50V 180P	1	
C3102		ECEA0JS470	Electrolytic 6.3V 47	1	
C3103		ECEA1CS100	Electrolytic 16V 10	1	
C3104		ECEA1CS470	Electrolytic 16V 47	1	
C3105		ECKW1H101KB	Ceramic 50V 100P	1	
C3106		ECEA1CS100	Electrolytic 16V 10	1	
C3107		ECCW1H220KC	Ceramic 50V 22P	1	
C3108		ECCW1H151KC	Ceramic 50V 150P	1	
C3109		ECCW1H121KC	Ceramic 50V 120P	1	
C3110		ECEA1CS100	Electrolytic 16V 10	1	
C3111,3112		ECKW1H561KB	Ceramic 50V 560P	2	
C3113		ECKW1H271KB	Ceramic 50V 270P	1	
C3115		ECKW1H103KF	Ceramic 50V 0.01	1	
C3116		ECCW1H270KC	Ceramic 50V 27P	1	
C3117		ECEA1CS100	Electrolytic 16V 10	1	
C3118		ECCW1H680KC	Ceramic 50V 68P	1	
C3119		ECKW1H471KB	Ceramic 50V 470P	1	
			Coils		
L3001		VLQEL06F680K	68μH	1	
L3002,3003		VLQEL06F221K	220μH	2	
L3004		VLQEL06F151K	150μH	1	
L3005		VLQEL06F820K	22μH	1	
L3006		VLQEL06F220K	22μH	1	
L3007,3008		VLQEL06F221K	220μH	2	
L3009		VLQEL06F100K	10μH	1	
L3010		VLQEL06F3R3K	3.3μH	1	
L3011,3012		VLQEL06F220K	22μH	2	
L3013		VLQEL06F3R3K	3.3μH	1	
L3014		VLQEL06F471K	470μH	1	
L3015		VLQEL06F221K	220μH	1	
L3016		VLQEL06F180K	180μH	1	
L3017,3018		VLQEL06F221K	220μH	2	
L3019		VLQEL06F151K	150μH	1	
L3020		VLQEL06F330K	33μH	1	
L3021		VLQEL06F1R8K	1.8μH	1	
L3022		VLQEL06F221K	220μH	1	
L3023		VLQEL06F220K	22μH	1	
L3024		VLQEL06F471K	470μH	1	
L3025		VLQEL06F100K	10μH	1	
L3026		VLQEL06F471K	470μH	1	
L3027		VLQEL06F100K	10μH	1	
L3028		VLQEL06F221K	220μH	1	
L3029		VLQEL06F390K	39μH	1	
L3030		VLQEL06F2R2K	2.2μH	1	
L3032		VLQEL06F820K	82μH	1	
L3033		VLQ02F222K	0.0022mH	1	
			Filters		
FL3001		VLF0056		1	
FL3002		VLF0112		1	
FL3003		VLF0115		1	
FL3004		VLF0120		1	
			Delay Line		
DL3001		VLD0012	2H	1	
			Connectors		
P3001		VJP1144	6P	1	
P3003		VJP1143	3P	1	
P3004		VJP1143	5P	1	
P3005		VJP1144	6P	1	
P3006		VJP1146	10P	1	
P3007,3008		VJP1141	2P	2	
P3009		VJP1144	6P	1	
P3010		VJP1145	8P	1	
P3011		VJP1142	3P	1	
P3013		VJP1143	5P	1	
P002		VJP1144	6P	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			VIDEO COLOUR		
			PRINTED CIRCUIT BOARD		
			(Colour Section)		
			Integrated Circuits		
IC8001		AN6360	Chroma ACC	1	
IC8002		AN6352	OSCDivider	1	
IC8003		AN6362	Chroma AFC	1	
IC8004		AN6371	Chroma APC	1	
IC8005		AN6551	OP Amp.	1	
			Transistors		
Q8001,8003		2SD636		2	
Q8004		2SC2206		1	
Q8005		2SD636		1	
Q8006		2SC2206		1	
Q8007		2SD636		1	
Q8008,8009		2SC2206		2	
Q8010,8011		2SD636		2	
			Diodes		
D8001-8010		MA165		10	
D8012,8106,8107		MA165		3	
			Thermister		
TH8001		ERTD2FHL102S		1	
			Resistors		
R8001		ERD10TJ223	22K	1	
R8002		ERD10TJ153	15K	1	
R8003		ERD10TJ682	6.8K	1	
R8004		ERD10TJ562	5.6K	1	
R8007		EVNK6AA00B23	Variable 2K	1	
R8008		ERD10TJ102	1K	1	
R8009		ERD10TJ122	1.2K	1	
R8010		ERD10TJ563	56K	1	
R8011		ERD10TJ103	10K	1	
R8012		ERD10TJ102	1K	1	
R8013		ERD10TJ181	180	1	
R8014		ERD10TJ122	1.2K	1	
R8015		ERD25TJ684	1/4W 680K	1	
R8016		ERD10TJ153	15K	1	
R8017,8018		ERD10TJ562	5.6K	2	
R8019		ERD10TJ153	15K	1	
R8020		ERD10TJ391	390	1	
R8021		EVNK6AA00B14	Variable 10K	1	
R8022-8025		ERD10TJ391	390	4	
R8026		ERD10TJ562	5.6K	1	
R8027		ERD10TJ273	27K	1	
R8028		ERD10TJ102	1K	1	
R8029		ERD10TJ331	330	1	
R8030		EVNK6AA00B23	Variable 2K	1	
R8031		ERD25TJ684	1/4W 680K	1	
R8032		ERD10TJ102	1K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R8033		ERD10TJ122	1.2K	1	
R8034,8035		ERD10TJ102	1K	2	
R8036		ERD10TJ561	560	1	
R8037		ERD10TJ152	1.5K	1	
R8038		ERD10TJ102	1K	1	
R8039		ERD10TJ182	1.8K	1	
R8040		ERD10TJ102	1K	1	
R8041		ERD10TJ122	1.2K	1	
R8042		ERD10TJ102	1K	1	
R8043		ERD10TJ103	10K	1	
R8044		ERD10TJ682	6.8K	1	
R8045		ERD10TJ103	10K	1	
R8046		ERD10TJ562	5.6K	1	
R8047		ERD10TJ103	10K	1	
R8048		ERD10TJ222	2.2K	1	
R8049		ERD25TJ821	1/4W 820	1	
R8050		EVNK6AA00B52	Variable 500	1	
R8051,8052		ERD10TJ562	5.6K	2	
R8053		ERD10TJ122	1.2K	1	
R8054		ERD10TJ472	4.7K	1	
R8055		ERD10TJ392	3.9K	1	
R3056		ERD10TJ182	1.8K	1	
R8057		ERD10TJ102	1K	1	
R8058		ERD25TJ274	270K	1	
R8059,8060		ERD10TJ222	2.2K	2	
R8061		ERD25TJ224	1/4W 220K	1	
R8064		ERD10TJ102	1K	1	
R8065		ERD10TJ472	4.7K	1	
R8066		ERD10TJ562	5.6K	1	
R8067		ERD10TJ152	1.5K	1	
R8068		ERD10TJ222	2.2K	1	
R8069		ERD10TJ391	390	1	
R8070,8071		ERD10TJ563	56K	2	
R8072		ERD10TJ272	2.7K	1	
R8073		ERD10TJ561	560	1	
R8074		ERD10TJ332	3.3K	1	
R8075		ERD10TJ102	1K	1	
R8076		ERD10TJ102	1K	1	
R8077		EVNK6AA00B54	Variable 50K	1	
R8078		ERD25TJ564	1/4W 560K	1	
R8079		ERD10TJ102	1K	1	
R8080		ERD10TJ333	33K	1	
R8081		ERD10TJ153	15K	1	
R8082		ERD10TJ102	1K	1	
R8083		ERD10TJ104	100K	1	
R8084		ERD25TJ334	330K	1	
R8085		ERD10TJ183	18K	1	
R8086		ERD10TJ473	47K	1	
R8087		ERD10TJ820	82	1	
R8088		ERD10TJ223	22K	1	
			Capacitors		
C8001		ECQV05109JZW	Mylar 50V 0.1	1	
C8002		ECEA1HS010	Electrolytic 50V 1	1	
C8003		ECKW1H103PF	Ceramic 50V 0.01	1	
C8005		ECKW1H103PF	Ceramic 50V 0.01	1	
C8006		ECKW1H103PF	Ceramic 50V 0.01	1	
C8007		ECKW1H103PF	Ceramic 50V 0.01	1	
C8008		ECCW1H390KC	Ceramic 50V 39P	1	
C8009,8010		ECCW1H103PF	Ceramic 50V 0.01	1	
C8011		ECCW1H220KC	Ceramic 50V 22P	1	
C8012-8014		ECKW1H103PF	Ceramic 50V 0.01	3	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C8015		ECEA1CS470	Electrolytic 16V 47	1	
C8016,8017		ECKW1H103PF	Ceramic 50V 0.01	2	
C8018		ECKW1H681KB	Ceramic 50V 680P	1	
C8019		ECKW1H103PF	Ceramic 50V 0.01	1	
C8020		ECKW1H102KB	Ceramic 50V 0.001	1	
C8021		VCY25563KX	Semiconductor 25V 0.056	1	
C8022		ECKW1H101KB	Ceramic 50V 100P	1	
C8023		ECKW1H271KB	Ceramic 50V 270P	1	
C8024		ECV1ZW20X44	Trimmer 1W 20P	1	
C8025		ECCW1H100DC	Ceramic 50V 10P	1	
C8026		ECKW1H103PF	Ceramic 50V 0.01	1	
C8027		ECEA1CS100	Electrolytic 16V 10	1	
C8028		VCY25472KX	Semiconductor 25V 0.0047	1	
C8029		VCKW1H821JSA	Ceramic 50V 820P	1	
C8030		ECEA1CS330	Electrolytic 16V 33	1	
C8031		ECEA1CS470	Electrolytic 16V 47	1	
C8032		ECEA1HS010	Electrolytic 50V 1	1	
C8033		ECQV05104JZW	Mylar 50V 0.1	1	
C8034		ECEA1CS100	Electrolytic 16V 10	1	
C8035		VCY25183KX	Semiconductor 25V 0.018	1	
C8036		ECCW1H181KC	Ceramic 50V 180P	1	
C8037		ECCW1H121KC	Ceramic 50V 120P	1	
C8038		ECKW1H821KB	Ceramic 50V 820P	1	
C8039		ECEA1HS010	Electrolytic 50V 1	1	
C8040		VCY25122KX	Semiconductor 25V 0.0012	1	
C8041		ECKW1H561KB	Ceramic 50V 560P	1	
C8042		ECKW1H221KB	Ceramic 50V 220P	1	
C8043,8044		ECKW1H103PF	Ceramic 50V 0.01	2	
C8045		ECEA1CS100	Electrolytic 16V 10	1	
C3046		ECKW1H103PC	Ceramic 50V 0.01	1	
C3047		ECCW1H040CC	Ceramic 50V 4P	1	
C8049		ECCW1H060DC	Ceramic 50V 6P	1	
C8050		ECV1ZW50X44	Trimmer 1W 50P	1	
C8051		ECEA1CS470	Electrolytic 16V 47	1	
C8052-8054		ECKW1H103PF	Ceramic 50V 0.01	3	
C8055		ECCW1H150KC	Ceramic 50V 15P	1	
C8056		ECKW1H103PF	Ceramic 50V 0.01	1	
C8057		ECEA1HS2R2	Electrolytic 50V 2.2	1	
C8058		ECKW1H103PF	Ceramic 50V 0.01	1	
C8060		ECKW1H103PF	Ceramic 50V 0.01	1	
C8061		ECEA1CS100	Electrolytic 16V 10	1	
C8062		ECKW1H471KB	Ceramic 50V 470P	1	
C8063		ECCW1H560KC	Ceramic 50V 56P	1	
C8064		ECKW1H103PF	Ceramic 50V 0.01	1	
C8065		ECCW1H560KC	Ceramic 50V 56P	1	
C8066		ECKW1H331KB	Ceramic 50V 330P	1	
C8067		ECEA1HS010	Electrolytic 50V 1	1	
C8068		ECKW1H103PF	Ceramic 50V 0.01	1	
C8069		ECEA1HS010	Electrolytic 50V 1	1	
C8070		ECKW1H101KB	Ceramic 50V 100P	1	
C8071		ECQV05104JZ	Mylar 50V 0.1	1	
			Coils		
L8001		VLQEL06F560K	56μH	1	
L8002		VLQEL06F221K	220μH	1	
L8003,8004		VLQEL06F6R8K	6.8μH	2	
L8005		VLQEL06F330K	33μH	1	
L8006		VLQEL06F101K	100μH	1	
L8007,8008		VLQEL06F221K	220μH	2	
L8009		VLQ02F682K	6.8mH	1	
L8010		VLQEL06F560K	56μH	1	
L8011		VLQEL06F470K	47μH	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
L8012		VLQEL06F221K	220μH	1	
L8013		VLQEL06F2RK		1	
L8014		VLQEL06F3R9K	3.9μH	1	
L8015		VLQEL06F221K	220μH	1	
			Filters		
FL8001		VLF0113		1	
FL8002		VLF0085		1	
FL8003		VLF0094		1	
FL8004		VLF0090		1	
FL8005		VLF0095		1	
			Delay Line		
DL8001		VLD0014	2H	1	
			Oscillators		
X8001		VSX0066	Crystal	1	
X8002		VSX0069	Crystal	1	
			Connectors		
P002		VJP1144	6P	1	
			Miscellaneous		
		VJH24	Test Pin	26	
		VGT0170-1	Tracking Knob	1	
		VJH0118	Front Jack Unit	2	
		VJS1155	Pin for Connector	11	
		VJS1143	5P	1	
		VJS1144	6P	1	
		VMX0226	Ceramic Spacer	2	
		VSCO493	Shield Case	1	
		VSC0494	Shield Case	1	

Ref. No.		Part No.	Part Name & Description		Pcs / Set	Remarks
			SECAM COLOUR CIRCUIT			
			IC			
IC8101		AN6552			1	
			Transistors			
Q8101-8103,		2SC2206			4	
Q8105						
Q8104		2SD636			1	
			Diodes			
D8101-D8105		MA165			5	
			Filter			
FL8101		EFCS4R5MS3C			1	
			Resistors			
R8101		ERD10TJ333		33K	1	
R8102,8117		ERD10TJ103		10K	2	
R8103,8110		ERD10TJ152		1.5K	2	
R8104,8111		ERD10TJ471		470	2	
R8105		ERD10TJ391		390	1	
R8106,8107		ERD10TJ102		1K	2	
R8108		ERD10TJ273		27K	1	
R8109,8121		ERD10TJ682		6.8K	2	
R8112		ERD10TJ271		270	1	
R8113		ERD10TJ123		12K	1	
R8114		ERD10TJ102		1K	1	
R8115		ERD10TJ331		330	1	
R8116,8122		ERD10TJ223		22K	2	
R8118		ERD10TJ104		100K	1	
R8119		EVNK4AA00B24	Variable	20K	1	
R8120		ERD10TJ392		4.7K	1	
R8123		ERD10TJ822		47K	1	
R8124		ERD10TJ272		15K	1	
			Capacitors			
C8101,8116		ECEA1CS100	Electrolytic 16V	10	2	
C8102,8114		ECCW1H103K	Ceramic 50V	0.01	2	
C8103,8107		ECCW1H102KB	Ceramic 50V	0.001	2	
C8104		ECCW1H150JU	Ceramic 50V	15P	1	
C8105		ECCW1H050CC	Ceramic 50V	5P	1	
C8106		ECQM1H153JZW	Mylar 50V	0.015	1	
C8108		ECCW1H100FC	Ceramic 50V	10P	1	
C8109,8111		ECCW1H102KB	Ceramic 50V	0.001	2	
C8110,8117		ECQM1H103JZW	Mylar 50V	0.01	2	
C8112		ECQM1H563JZW	Mylar 50V	0.056	1	
C8113		ECEA16Z47	Electrolytic 16V	47	1	
C8115		ECEA1HS010	Electrolytic 50V	1	1	
C8118		ECQM1H562JZW	Mylar 50V	0.0056	1	
			Coils			
L8101		VLQEL06F221	Peaking	220µH	1	
L8102		VLQ80F560	Peaking	56µH	1	
L8103		VLQ02F682	Peaking	6.8mH	1	
			Connector			
P8101		VJP1143	5P		1	

Ref. No.		Part No.	Part No.	Pcs / Set	Part Name & Description
			PARTS CHANGE		
		NV-7000E	NV-7000EG		
358 (8)		VQF0530	VQF0561	1	Fan Bag
362 (8)		VPG0763	VPG0829	1	Packing Case